JPRS-UEA-87-019
29 JULY 1987

FOREIGN BROADCAST INFORMATION SERVICE

JPRS Report

Soviet Union

Economic Affairs

JPRS-UEA-87-019

29 JULY 1987

SOVIET UNION
ECONOMIC AFFAIRS

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BELOUSOV DISCUSSES ECONOMIC RESTRUCTURING

Moscow EKONOMICHESKIYE NAUKI in Russian No 3, Mar 87 pp 3-12

[Article by R. Belousov, professor, doctor of economic sciences: "Improving the System for Managing the National Economy"; passages in all capital letters printed in italics in source]

[Text] The problem of creating a largely new, effective and flexible system for managing the national economy is now the focus of both practical activity and theoretical thought. "Economic management obviously requires continuous improvement. But the situation today is such that partial improvements are not enough: radical reform is required. (1) Economists have been assigned the task of formulating specific recommendations on the basis of their research on the restructuring of management systems and techniques. Scientific substantiation of the principles and general system of the new economic mechanism functioning under the conditions of the intensification of production has reached such a level that a system of sufficiently substantiated principles characterizing the long-range model of the interaction of economics, policy and management has already been formulated. The problem now is to find and implement in practice the best such model based on the pronouncements of the January (1987) Plenum of the CPSU Central Committee that developed the ideas of the 27th CPSU Party Congress. The interpretation of the results of the large-scale economic experiment is called upon to play a large role here.

Both the internal and external conditions of the country's economic construction underwent radical change in the late 70's and early 80's. In this regard, we should first of all point to the dramatic change in the correlation of forces with the USA, the leader of the capitalist world. In the early 50's, key Soviet economic indicators were less than two-fifths of the corresponding U.S. indicators. By the beginning of the 80's, however, the scientific, production and resource potential of the two countries was more equal. As a result, the Soviet Union was able to realize such an exceptionally important task as the task of achieving approximate military parity with the USA. Naturally, this historic success did not come easy. It required enormous effort and resources. Nor was it possible to achieve balanace in all respects. Nevertheless, the Soviet people's real incomes were raised two-three fold in the last 30 years, which served as a favorable prerequisite for advancing new, large-scale socioeconomic tasks in the future.

These successes generated a certain amount of complacency and blunted the reaction to new practical demands. However, under the conditions of the NTR [scientific-technological revolution], they have been advanced with unprecedented scope and dynamism.

Economic science has also failed to respond promptly to the urgent needs of social development. Here, too, a special word should also be said about the lag in theoretical research on the socialization process under present conditions, i. e., in the substantiation of more effective forms of combining scientific-technical, economic and social factors into a new driving force capable of raising the rate of economic growth and improvement of the total life-activity of our society. Nor has the question of the utilization of all advantages of socialist ownership under the conditions of the NTR for deepening the social division of labor and, above all, for increasing labor cooperation and planomernost [systematicness] of economic development been properly resolved. Current practice reveals that it is specifically the imperfection and lack of reliability of relations between allied producers that primarily inhibits specialization and hence scientific-technological progress and the enhancement of quality and efficiency as well. The wage, pricing, planning and accountability methods and forms that have existed until recently have for the most part created optimal cost-accounting conditions for the "middle-of-the-roader" while placing front-rank enterprises and innovative workers in a relatively more strained position.

Under these conditions which did not meet practical demands, there was a need for bold, decisive efforts to overcome existing inertia and to bring the enormous potential of our economic science and economic practice into play. Such measures were taken by the April (1985) Plenum of the CPSU Central Committee, which substantiated and advanced a strategic course of accelerating the socioeconomic development of Soviet society. This course was supported, creatively developed, intensified, and concretized in the documents of the 27th CPSU Party Congress, which is the party's primary historic contribution to the development of Marxist-Leninist economic theory and practice of socialist and communist construction. In our view, the most important aspects of the party's economic strategy in the foreseeable future is summed up in the following important formula: "The essence of the changes lies in shifting emphasis from quantitative indicators to quality and effectiveness, from intermediate to final results, from the expansion of productive capital to the modernization of this capital, from the increased volume of fuel and raw material resources to their better utilization, to the accelerated development of science-intensive branches and of the productive and social infrastructure." (2) The acceleration concept, which has become an integral part of the new CPSU Program, is the theoretical substantiation of the principal way of attaining a qualitatively new state of Soviet society.

The purposeful and uniquely difficult struggle for cardinal change in all basic spheres of the Soviet people's life activity has begun and is unfolding on an ever-increasing scale. IN THE AREA OF SOCIAL PRODUCTION, it takes the form of the practical transition to an economy with the highest level of organization and effectiveness. Such a transition presupposes the all-round development of the productive forces, the further improvement of socialist production relations, and the implementation of measures to restructure the

economic mechanism. By the end of the year 2000, it is planned to double the nation's production potential while securing its basic qualitative modernization. During this time, there will be a twofold increase in the volume of resources allocated for satisfying the people's needs. Such positive changes are to be carried out on the basis of the widespread application of the latest advances of the NTR and on a 2.3-2.5-fold increase in labor productivity. IN THE SOCIAL AREA, decisive steps are being taken to further improve society and work collectives, to develop man and his way of life in every sense. This presupposes enriching the creative nature not only of labor but of leisure time as well. The inherently socialist principles of social justice, of bringing classes and social groups closer together, of eliminating essential distinctions between town and country, and of improving national relations are consistently observed everywhere. IN THE POLITICAL LIFE of Soviet society, at a time when the decisions of the 27th CPSU Congress are being implemented, a central place is assigned to the improvement of Soviet democracy, to securing the ever more complete realization of socialist self-government based on the everyday, active and effective participation of the working people, their collectives and organizations in the solution of problems in the life of the state, society and production. Such is the broad and largely new socioeconomic background which, having been created on the basis of the decisions of the 27th CPSU Congress, also determines current measures to improve management of the USSR national economy.

Theoretical Principles of the New System of Management

The qualitative restructuring of the system of management based on the documents of the 27th CPSU Party Congress means combining centralized leadership (and its strengthening) more firmly and flexibly with the increased self-management of the basic production links--enterprises and associations--and with the actual increase in the role of the local soviets. In other words, the contradictory unity of the interests of society, collectives and individual workers that has resulted from the absolute dominance of social socialist ownership must be practically realized in a new economic mechanism at a signficantly higher level of effectiveness. The resolution of this ultimately decisive practical problem is integrally linked to successes in the development of economic theory. In particular, we must reckon with the fact that economic theory has not yet come up with a clear answer to the question of how the individual work collective is "written into" public property relations. There is obviously every justification for considering the latter to be the collective representative of the people, the personification of the people's interests, i. e., a responsible agent of management of the functioning of social ownership at a given enterprise. However, it would be wrong to entirely equate the collective with the agent (proprietor) of socialist ownership. In interrelations between the collective and all the people as the sole owner, there are albeit nonantagonistic but nevertheless very real and reproducing contradictions which while continuing to be real must not be underestimated or ignored. In order to overcome these contradictions and to use them as an effective source of constructive development, it is necessary to find and introduce into practice scientifically substantiated and more sophisticated planning and cost-accounting instruments, methods and forms. At the same time, it must always be taken into account that any attempt to combine the functions of central

leadership and self-management at the local level, as the experience of history shows, has a negative impact on the quality and general effectiveness of national economic development.

All this presupposes the substantial RESTRUCTURING OF THE FORMS, METHODS AND STYLE OF WORK OF CENTRAL ECONOMIC ORGANS, especially USSR Gosplan and other departments. They are called upon to strengthen the elaboration of the integrated approach to the solution of key problems in the acceleration of the nation's socioeconomic development and to assume full responsibility for the rapid realization of qualitative structural change, for the balance and effective growth of social production.

THE TRANSITION TO ECONOMIC METHODS OF MANAGEMENT AT ALL LEVELS OF THE NATIONAL ECONOMY IS ANOTHER KEY IDEA IN MANAGEMENT REFORM. This means the transition from the mobilization-directive type of management that was successful in the past (under the given historical conditions) to normative management that more creatively and consistently utilizes the action of the economic laws of socialism. In terms of depth and significance, this transition can be compared with the transition from prodrazverstka [requisitioning of grain by force] to prodnalog [tax in kind in the form of foodstuffs] in 1921-1922.

The objective norms of socially necessary expenditures on the satisfaction of a specific need (or on the production of a unit of use value) are a key working part of the mechanism of all economic laws. This is especially true of the law of time saving, the degree of action of which should grow "to a much higher degree" (3) with the transition to more mature forms of socialist relations. However, as yet this does not occur to the same degree that it should occur by virtue of objective conditions. This situation is in large measure explained by serious deformations in the normative base of the economic mechanism that has been in operation up until recently. When we touch upon this problem, we must say that economic science is still not devoting proper attention to the action of the law of time saving--the objective law of the increasing effectiveness of reproduction.

The action of the law of systematic development is closely associated with norms governing socially necessary expenditures since maximum balance between resources (production) and needs (consumption) is attainable only if the expenditures of labor, raw materials, energy, and other material goods are optimal. It should be emphasized that attempts to attain a high level of balance (and hence of proportionality as well) solely by expanding extraction, production or imports, i. e., by increasing the resource part of the balances have never produced effective results when the norms have been stable or have even been increasing (as is the case, for example, with feed in animal husbandry).

The shortage of economically substantiated norms and their poor quality also hinder the actions of other objective laws--the law of distribution according to the results of labor, the law of value, etc., that are effective for socialist society, which ultimately reduces the effectiveness of the management mechanism as a whole and consequently of all social production. Someone may object that we use a great many norms in planning and incentives. It is indeed true that several hundred million norms of various types are used

in economic practice at all levels of management. But, first, most of them are individual norms that are tailored to the level of technology, organization, discipline and skill levels existing at a given enterprise or even an individual work station. Such norms are not counted as part of the socially necessary expenditures and quality, i. e., are not objective effectiveness norms and hence do not stimulate but frequently inhibit the collective's progress in production and social development.

The transition to economic methods of management presupposes the creation of the appropriate tools--consolidated norms that are equalized (averaged) for the basic production of a given product and thereby approximate socially necessary expenditures to the maximum. These norms may be of two types: (a) indicators that regulate economic, including distribution, relations depending on the movement of individual parameters of economic activity of the collective, for example: the normative correlation between the growth of labor productivity and the growth of average wages; the norm governing the growth of the wage fund depending on the growth of net output; the profit distribution norm, etc.; (b) averaged norms governing the labor-intensiveness of products, the per unit expenditure of raw materials, supplies, energy, and equipment per aggregate or physical unit of a product of a certain quality. Such norms regulate enterprise activity directed toward resource conservation.

The further improvement of specific forms of distribution relations holds special significance for the development of economic methods of management. The normative approach to the formation of specific forms of wages and all material incentive funds makes it possible to use a more substantiated and reliable economic criterion (basic reference point) for substantiating and constructing specific forms of distribution relations that are differentiated in accordance with the actual useful results of economic activity.

The expansion of economic methods of management also presupposes a more active role for and substantial improvement of the quality of commodity-monetary relations that are a flexible binding link between production, distribution and consumption. The most important quality of commodity-monetary relations is that the law of their action (law of value) compels each producer to improve quality and lower costs and hence to seek and introduce advances in science and technology, progressive knowhow and innovations. The schema of such action is quite simple: through price, society conveys to the producer a strict norm governing socially necessary costs and quality. Concrete forms of economic relations develop on the basis of and around this norm directly in production, distribution and circulation. The 27th CPSU Congress naturally demanded the elimination of the prejudice surrounding commodity-monetary relations and hence, price as well, as well as their more complete and effective use in planned economic management. "The healthy functioning of commodity-monetary relations on a socialist basis," stated M. S. Gorbachev, "is capable of creating such a situation and such conditions in management that its results depend entirely on the quality of the collective's work, on the ability and initiative of the managers." (4) The practical task is: (a) to make the gradual transition to wholesale trade in the means of production; (b) to balance the market for consumer goods and services; and (c) to improve foreign trade activity.

The regulation of the consumer goods and paid services market will increase the stimulating influence of distribution based on labor and will permit its more complete and effective combination with the freedom to choose a good in accordance with a person's individual tastes and inclinations. Such regulation presupposes the restoration of the correspondence between supply and demand for goods and services and the elimination of their scarcity which will make it possible, in particular, to destroy the soil for profiteering and a number of other abuses.

The August 1986 degree of the CPSU Central Committee and the USSR Council of Ministers "Measures for Improving Economic and Scientific-Technological Cooperation With Socialist Countries" calls for raising the level of coordination of the work of ministries, departments and organizations engaged in trade, economic, currency, financial, and scientific-technical relations with foreign countries on the one hand. The USSR State Committee for Foreign Economic Relations was established for this purpose. On the other hand, on 1 January 1987, more than 20 ministries and departments and 70 of the largest associations and enterprises that had created cost-accounting foreign trade firms in their structure were authorized to engage directly in export-import operations that included markets in capitalist and developing countries. With the creation of the corresponding prerequisites, these rights can be granted to other ministries, organizations and enterprises. The Ministry of Foreign Trade and USSR State Committee for Foreign Economic Relations have been assigned the obligation of overseeing all foreign trade operations in order to secure the state's interests.

Yet another key principle in the management reform concept envisages the restructuring of the modern organizational structure with regard to production concentration, specialization and cooperation trends. It should be noted that while in the 20's, the theory of organizational relations clearly overshadowed economic problems, in recent decades there was an undesirable bias in the reverse direction: organizational science was generally forgotten. As we know, in the present, critical stage of intensive restructuring, there is an urgently felt need for all-round organizational improvements in existing structures and the search for new, more effective structures for combining science with production, for integrating allied production facilities into a single complex, for creating territorial-production and other interbranch formations. The two principal levels of formation of new organizational structures were noted: the first--directly in the production sphere; the second--in the sphere of activity of branch and central organs of management.

The restructuring of the basic links--enterprises and associations--is most important. They act first and foremost as a new organizational and economic form for coupling science to production. As an example, one can point in particular to the mammoth "Elektrosila" Power Machine Building Production Association which incorporates a scientific research institute in addition to production enterprises. In terms of technical and economic parameters, the powerful generators produced by the association are on a par with the best in the world.

Something remarkable occurred in the latter part of 1986: a number of leading associations received the rights of head organizations that could

independently determine the future technical development of the products in which they specialized. Among them was the well-known Ivanovo Machine Building Association which was among the first in the vanguard of scientific-technological progress: its machine tools are successfully competing in the world market with the products of the best foreign firms. Today the managers, designers, and other specialists of head associations are themselves developing new machinery and are themselves responsible (financially and otherwise) for its qualitative and economic parameters. Such a policy, which embodies the ideas of the 27th CPSU Party Congress, is of basic importance in supplying the market with quality products and in tooling up for the mass production of new generations of machinery in a short period of time. Thus, for example, it is planned to increase the production of machining centers six-fold during the five-year plan and to increase the production of adaptive production modules 2.5-fold.

The number of scientific-technical associations in the USSR is ever growing. They have scientific research institutes as their core. Production subdivisions attached to these institutes not only fabricate specialized equipment prototypes but also organize their series production. Of late an ever increasing role has been played by such an effective form of linkage of science and production as interbranch scientific-technical complexes that incorporate large academy [of sciences] institutes, design organizations, and pilot production. Industrial associations in machine building branches have been abolished. Those of their functions that are vitally necessary have for the most part been transferred to production associations rather than ministries. Thus, the branch management system has generally become a two-tiered system.

The restructuring of ministries is more complex. Up until now, their activity has frequently generated departmental interests that have inhibited scientific-technological progress and that have frequently been an obstacle to the true merger of advances of the NTR with advantages of the socialist system of management. The introduction of progressive innovations has often been frustrated by the interests of individual departments. Branch ministries have frequently been to blame for lag in the development of the social infrastructure, including housing and municipal services, in a number of regions, especially regions of new development.

Branch ministries today, albeit slowly, are restructuring the style and methods of their work. As already stated, some of the functions and powers of their main administrations, inter alia in the area of technical policy, are being transferred to head science-production and production associations. Ministries continue to develop strategies for future branch development in general, including qualitative structural change and the increased specializaiton of production. They are also responsible for developing stable cooperative relationships and for resolving major social problems. At the same time, for various reasons, ministries continue to concern themselves with routine matters--supply, finance, reassignment of personnel, etc. For example, ministries and enterprises that are converted to self-financing are faced with the question of what to do with enterprises operating near or even below the breakeven point, with technically backward plants that as a rule have worn-out and obsolete equipment, that are understaffed with specialists,

that have a neglected social infrastructure, and where the skill level of workers in the mass occupations is relatively low. Branches usually use centralized capital investments and their own resources to carry out reconstruction and the technical retooling of production at such enterprises, to expand housing construction, to retrain personnel, and to modernize the product mix. But all this takes a considerable amount of time. Therefore, for the time being they must resort to the redistribution of material and financial resources.

Many interbranch problems also remain open. Practice has suggested two basic ways of resolving them from the standpoint of management organization. The agrarian sector has abolished narrow branch ministries on the basis of the principle that the production of food and agricultural raw materials, starting with work on the land and ending with the finished product must be carried out within the framework of a single organizational system. Its management is now organized according to the territorial principle: rayon agro-industrial associations and corresponding associations have been established at all levels of state power up to the Agroprom of the USSR Council of Ministers.

The approach has been different in branches where territorial integration would impede the implementation of a uniform technical policy, where specialized production facilities are closely connected to one another by similar technologies, by cooperative relations, by the use of secondary raw materials and waste materials, and by common economic goals. Machine building, for example, is in such a situation. It is fragmented among a considerable number of independent ministries and departments, the amalgamation of which would hardly produce positive results with the two-tiered system of management: a very large number of production subdivisions would be subordinate to such a consolidated ministry. Some existing ministries have been preserved for the sake of ensuring general unity of the machine-building complex on the one hand and of preserving the production autonomy of individual subbranches on the other. But their activity is coordinated and directed by the Bureau for Machine Building, headed by a deputy chairman of the USSR Council of Ministers.

Local soviets have been given broader rights in planning and managing consumer goods production, the social infrastructure and the development of the service sphere directly associated with the satisfaction of the population's needs. State and economic organs at the republic and the local levels will have to largely change their attitude toward the question of supplying the market with quality goods and services and will have to direct the contribution of every work collective toward the realization of this very important task.

Yet another fundamental principle in the general concept of the reform was formulated in the Political Report of the CPSU Central Committee to the 27th CPSU Party Congress as follows: "...to secure the all-round democratization of management, to raise the role of work collectives in management, to strengthen oversight from below, to strengthen accountability and glasnost in the work of economic organs."(5)

Our country's working people have always participated in work on state, social and economic problems, but have done so primarily through their

representatives in soviet, party and trade union organs. The new approach, on the other hand, requires work collectives to be directly involved in a considerably wider range of questions concerning the technical development of the corresponding enterprises, improvements in working, living, and recreational conditions, and other aspects of professional and social life. This means that work collectives and each individual worker have not only greater rights but higher responsibilities as well. As is known, socialist ownership means the centralization of the greater part of both income and losses. Accordingly, society, i. e., all the nation's working people and each of them as individuals pay for mismanagement. Society's interests are best served by the situation described in the documents of the 27th CPSU Congress in which individual work collectives and workers feel their attainments and derelictions to a considerably greater degree.

The Restructuring of the System of Management in Practice

The transition from theory to its implementation is always more complex especially when a new socioeconomic mechanism is involved. This requires the painstaking, more precise definition of individual principles, with due regard to a vast number of circumstances, and the correction of forms and plans. An exceptionally important part here is played by the restructuring of economic thought and by the maneuvering and replacement of cadres.

Industry, all branches of material production and the service sphere, transport, and trade have now either been converted or are in the process of being converted to the new conditions of management. While performance evaluation and incentives continue to be based on "increments" in labor productivity, a more progressive direction is developed by the new system of management: rewards for the existing level of effectiveness. This direction has been tested at VAZ and at the Sumy Science-Production Machine Building Association. When the orientation is toward stimulating "increments" at enterprises, the reference point is the actual wage fund in the base year. An increase in the fund depends directly on the growth of labor productivity in accordance a special fixed norm. The enterprise has one more important source for increasing the incomes of workers and specialists: the saving of the wage fund. The entire sum of this saving goes to the material incentive fund and is used to raise the rates of highly skilled workers in recognition of their mastery of an occupation as well as to engineering-technical personnel and white-collar workers.

Material incentives are also increased for the overfulfillment of the plan target for increasing profits, and for increasing the share of high quality products in total production volume. A number of benefits and rewards have been instituted for work collectives delivering products for export. There is only one constraint in all this: the increase in the average wage as a result of all additional payments must not exceed the growth rate of labor productivity.

The growth of the fund for sociocultural measures, which in the future will play the main role in improving industrial workers' housing and amenities in the future will be made directly dependent on the dynamics of labor productivity and the increased effectiveness of production.

Another sphere of economic activity in which the rights and real possibilities of enterprises are substantially expanded are technical retooling, modernization, and in a number of cases, the reconstruction of productive capital. Without this, scientific-technological progress and the acceleration of socioeconomic development are impossible. The 27th CPSU Congress in its resolution on the Political Report of the Party's Central Committee emphasized that "each branch, enterprise and association must have a clearly defined program for the continuous modernization of production. Those managers who substitute measures for show and half-way decisions for the real thing, who distort the very idea of technical reconstruction must be sternly dealt with." (6)

In addition to the considerably greater degree of autonomy and initiative of enterprises in elaborating and deciding questions relating to the technical retooling of production, wages, and social measures, the new methods of management also provide for certain changes in planning. In accordance with these changes, the fulfillment of delivery contracts, profit growth quotas (quotas for reducing the prime cost of production), and quotas for raising labor productivity have acquired paramount importance. USSR Gosplan informs enterprises of the control figures for the development of production in the future plan period and stable norms for the growth of wages as well as for the formation of the development fund, the material incentive fund, and the fund for sociocultural measures.

Under such conditions, the work collective's interest in the rational utilization of resources and in high end results of economic activity encourages the drafting of an intensive plan which, in the form of a counter-proposal "from below," is analyzed and approved by higher organs and becomes the state plan for a given association (enterprise).

Another direction of the new economic mechanism involves the practical introduction of the criterion of performance evaluation and incentive "for the existing level of effectiveness." Profit plays the part of the general indicator of effectiveness here. The principal novelty of this system is that the association (enterprise) is supposed to share in the profits in the case of the self-financing of technical and social development from the part of the profit that is left at the disposal of the collective. It is used to finance the development and assimilation of new products, for the technical reconstruction and modernization of existing productive capital, for material incentives and housing construction, and for other social needs. Since the norms (share) of payments from profits to the state budget are established beforehand for a five-year period, the collective is interested in increasing the profit volume.

There is already quite convincing practical confirmation of the effectiveness of the new direction of improvement of the economic mechanism. In the very first year of the Sumy science-production association's operation under the new conditions, it raised labor productivity by 13.6 and profit volume by 32.4 percent. It also improved other qualilty indicators signficantly.

The system for managing agricultural production is being restructured according to roughly the same self-sustaining principles. Republics, krays

and oblasts are assigned firm targets for deliveries to centralized funds. All output in excess of these targets is used to improve supply to the local population. Kolkhozes and sovkhozes are assigned firm purchase plans for various years of the five-year plan. They may use output in excess of these plans (and in the case of potatoes, fruit and vegetables--a considerable part of the planned output as well) at their own discretion: they may sell additional quantities to the state; they may sell their produce in the kolkhoz market or through cooperative trade; or they may use it for other needs, including personal subsidiary farming. A direct dependence has been established between enterprise income and performance. At the same time, enterprises have greater opportunity to use profit to finance measures for raising the technical level of agricultural production and for improving the working, living, and recreational conditions of kolkhoz and sovkhoz workers. At the same time, contract work and the lump wage payment system are becoming widespread on farms at the level of the brigade, link, and family with means of production, including land, being assigned to them for an extended period of time.

The new methods of economic management, which have become the result of the creative work of the party and of the new ideas and principles advanced by its 27th Congress are geared to the initiative of people, to their creative activism, to their readiness to find and use additional reserves for intensification and production growth. The initial results of fulfillment of the targets of the 12th Five-Year Plan indicate that the policy of improving the system of management is justified and is helping to attain the final goal of restructuring formulated by the January (1987) Plenum of the CPSU Central Committee: the renewal of all aspects of societal life in depth; the enrichment of socialism with the most sophisticated forms of social organization; and the most complete disclosure of the humanistic nature of our system in all its decisive aspects--economic, sociopolitical and moral.

FOOTNOTES

1. "Materialy XXVII syezda Kommunisticheskoy partii Sovetskogo Soyuza" [Materials of the 27th Congress of the Communist Party of the Soviet Union], Moscow, 1986, p 33.

2. Ibid., p 25.

3. See: K. Marx, et al, "Sochineniya" [Works], 2d ed., Vol 46, part I, p 117.

4. "Materialy..." op. cit., pp 40-41.

5. Ibid., p 34.

6. Ibid., p 102.

CSO: 1820/160
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IMPACT OF MANAGEMENT REFORM ON SUPPLY OPERATIONS ASSESSED

Moscow MATERIALNO-TEKHNICHESKOYE SNABZHENIYE in Russian No 3, Mar 87 pp 3-11

[Article by B. Yakovlev, deputy chairman, USSR State Committee for Material-Technical Supply [Gossnab]: "The New Conditions of Management and Delivery Discipline"]

[Text] In the light of the tasks advanced by the 27th CPSU Congress pertaining to the acceleration of the nation's socioeconomic development, an important place is assigned to raising the level of material-technical supply of the national economy, to transforming it into a flexible economic mechanism guaranteeing the stable and rhythmic operation of enterprises and organizations. From the standpoint of these demands, there is need for substantial strengthening of delivery discipline thereby ensuring the necessary conditions for the restructuring of economic management and a higher degree of effectiveness of social production.

The priority of the contract is growing immeasurably in the current year and its positions are being strengthened. This is promoted by the introduction of the new indicator that is used to evaluate the performance of associations, enterprises and organizations. Producers must now be oriented toward the 100 percent fulfillment of delivery targets and obligations in accordance with concluded contracts.

Some positive trends have been noted in economic practice in this direction of late. Most associations and enterprises are concluding contracts in good time and are trying to fulfill the contracts more completely within the specified period of time. Not only customers but suppliers as well have developed a taste for contracts. A specific order instills discipline and establishes the orientation toward certain technological operations and a definite production program.

And as a result of the higher level of organization in production, the strengthening of plan and labor discipline, and the introduction of the new economic methods of management, the level of fulfillment of contractual delivery obligations has been higher in the first year of the 12th Five-Year

Plan. The volume of delivery shortfalls is steadily declining and there has been a substantial reduction in the number of enterprises failing to meet their targets and to fill accepted orders.

It is by no means a matter of chance that there is great interest in concluding long-term contracts giving suppliers and customers the possibility of cooperating more closely with one another and of jointly developing the most rational terms of delivery. Organizations belonging to USSR Gossnab receive over 70 percent of the products sold through our system under long-term contracts.

Many suppliers and customers that have been converted to direct long-term economic ties concluded contracts for all five years even before the 12th Five-Year Plan. They include such major enterprises as the West Siberian, Magnitogorsk, Nizhniy Tagil, Novolipetsk, and certain other metallurgical combines belonging to the USSR Ministry of Ferrous Metallurgy.

Most territorial organs have concluded long-term contracts with large customers converted during the current year to supply based on wholesale trade. Lenglavsnab [Leningrad Main Administration for Material-Technical Supply] concluded 176 such contracts; Kuzbass Main Administration for Material-Technical Supply--115; Mosgorglalvsnab [Moscow City Main Administration for Material-Technical Supply]--approximately 70. The supply of customers will be irregular and will be based on orders [zakazy].

At the same time, the fulfillment of delivery targets and obligations in accordance with concluded contracts still does not meet current demands.

This conclusion is confirmed by numerous facts. While fulfilling last year's sales plan in terms of overall volume, enterprises undersupplied customers with more than seven billion rubles' worth of needed products. Almost 16 billion rubles' worth of unordered products were produced and sold. Substantial material and labor resources are expended on their production.

We still encounter direct violations of state, plan and contractual discipline as well as manifestations of departmentalism and localistic tendencies. In the first half of 1986 alone, USSR Gossnab discovered more than 1500 cases of sales of goods without allocations [bessfondavaya realizatsiya] and of unlawful use of scarce products by suppliers. There are also other negative phenomena that have a negative impact on delivery discipline and that work to the detriment of the national economy. Among them, shortcomings in the practice of concluding contracts. Despite the fact that the percentage of conclusion of delivery contracts on schedule is generally higher, there are still many producers who do not conclude contracts for the full volume of deliveries by the beginning of the year. This disorganizes the work.

According to the existing procedure, based on the established targets, associations, enterprises, and organizations have the obligation to conclude contracts with suppliers and customers before the beginning of the planned year and of coordinating preparations for production with material resources.

Such deviations place a high measure of responsibility on economic management organs. They must focus special attention on the elimination of existing violations of the established rules for concluding contracts.

I shall discuss several basic aspects of this important work.

The communication of production and distribution plans to enterprises and organizations in good time, the matching of buyers to suppliers, and the observance of discipline and legality in planning are among the conditions to the timely formation of economic contractual relations.

Earlier deadlines have now been established. USSR Gossplan establishes production targets for USSR ministries and departments before 10 August and assigns allocations for material resources prior to 1 September of the year preceding the planned year. By this time, allocations for products on the list of USSR Gossnab and USSR ministries and departments are released to the fondaderzhateli [allocation-holders]. The fondaderzhateli in turn distribute resources and communicate production plans to subordinate enterprises and material-technical supply organs that issue warrants before 1 October. In accordance with the new procedure, the issuance of warrants is completed by 15 October.

Some of the ministries and departments are meeting these deadlines. Many soyuzglavsnabsbyts [USSR Gossnab main administrations for material-technical supply] completed the warrants for 1987 on schedule. This enabled suppliers and customers to commence concluding contracts on schedule and to begin preparations for producing products needed by the customers.

For example, by September of last year, the Riga Rail Car Plant had already concluded 95 percent of its contracts for the delivery of products in the forthcoming year; the Leningrad Machine Building Association imeni Karl Marx--92 percent. The list of these examples could be continued.

However, the situation is not well everywhere. There are serious derelictions by ministries, departments, and other economic organs. They are occasioned by all the same reasons as in the past: the failure to communicate plan targets to enterprises in good time; the late distribution of allocations by fondoderzhateli; postponement of issuance of plan acts for the delivery of products.

USSR Gossplan itself has been among the violators. It has not met the deadline for conveying targets on production and allocations for material resources to a number of soyuzglavsnabsbyts. Soyuzglavmetall [Main Administration for Metal Production] did not receive the draft plan for the distribution of rolled ferrous metals in 1987 from USSR Gossplan until 22 September 1986 (deadline: 1 September). The data on allocations for newly created construction ministries were not known until 20 November. As a result of delays in the distribution of allocations, Soyuzglavtsvetmet [Main Administration for Nonferrous Metals] did not effect the orders of nonferrous metals entirely.

This is not the first year that Soyuzglavavtoselmash [Main Administration for Automobiles, Tractors, Agricultural Machines and Spare Parts] has not received plans for the production and distribution of trucks, buses and tractors in good time from USSR Gossplan, USSR Ministry of the Automotive Industry and USSR Ministry of Tractor and Agricultural Machine Building. Therefore, the advance orders of machinery for the first quarter is usually 20 percent of the volume of deliveries in the preceding year, which subsequently leads to numerous changes in the warrants that are issued.

Soyuzglavkommash [Main Administration for Machine Building Products for Public and Domestic Uses] distributes approximately 1300 products of several ministries. Ministry-suppliers had submitted plans for the production of only 250 products by manufacturing enterprises to this soyuzglavsnabsbyt by the deadline.

The USSR Ministry of Construction, Road, and Municipal Machine Building and the USSR Ministry of the Gas Industry have failed to meet the deadline. Only after repeated appeals from Soyuzglavkommash [Main Administration for Machine Building Products for Public and Domestic Uses] and the leadership of USSR Gossnab were draft production plans conveyed to subordinate enterprises. The result was a long delay in matching customers to suppliers and in the conclusion of contracts for the delivery of machinery and gas equipment.

USSR Gosagroprom also failed to meet the deadline for submitting plans for the production of cooking salt by suppliers. Soyuzglavsnabsbyt was compelled to make an advance order at the level of the previous year. But this is wrong. The amendment of already issued warrants destabilizes economic and contractual relations and has a negative impact on the fulfillment of contractual obligations.

The planning of production without proper preparation for such production is a serious obstacle to the timely conclusion and precise fulfillment of contracts. In connection with the reconstruction of the "Plant imeni Vladimir Ilich" Production Association, the USSR Ministry of the Electrical Equipment Industry together with USSR Gossplan decided to transfer the production of a sophisticated electric motor to the Frunze "Tyazheloelektromash" Plant imeni 60-letiye Kirghiz SSR and the Novokakhovskiy Electric Machine Building Plant imeni 50th Anniversay of the Great October Socialist Revolution. Soyuzglavelektro [Main Administration for Electrical Engineering Production] issued these enterprises warrants for the delivery of motors. However, the enterprises disputed them on the grounds that they were not tooled up for production and that the accessories and technical documentation were not available.

There continue to be numerous rebukes addressed to fondoderzhateli that grossly violate the deadlines for distributing allocations and for issuing counterwarrants [raznaryadki] to suppliers. Last year alone, this was the reason for 50-60 percent of all tardinees in the formation of contractual relationships between suppliers and customers. USSR Gossnab raised the question of bringing order in this area before the leadership of USSR Ministry of Power and Electrification, the USSR Ministry of the Electrical Equipment Industry, USSR Ministry of Trade, and a number of other fondoderzhateli where

these facts are especially common. While branch headquarters maintain that measures have been taken, facts attesting to the lack of discipline are repeated.

The responsibility for observing the legislatively established deadlines for communicating plan targets to performers is borne not only by the leadership of ministries and departments but also by contract (legal) services. After all, in every case there are serious shortcomings in the organization of the work and there is nonobservance of legislative demands. It must be noted that work preceding the conclusion of contracts is frequently outside the field of vision of the contractual-legal departments that are called upon to monitor the observance of legality in the planning of deliveries, to provide legal means for the conditions necessary for the strict observance of the established rules for forming economic and contractual relations.

The same rebuke is also deserved by the legal services of soyuzglavsnabsbyts, soyuzglavkomplekts [main administrations for equipment procurement], and gossnabs of union republics and main territorial administrations. The rebuke is particularly merited by gossnabs of the Azerbaijan SSR, Georgian SSR, Belorussian SSR, Ukrainian SSR, and the Bashkir, Moscow, East Siberian, and Yakut main territorial administrations.

Supplier and customer enterprises are also to blame for delays in concluding contracts. For example, examination of work in the "Kauchuk" Association revealed that many customers were tardy in supplying the association with the necessary technical specifications for the products it was to produce. Nevertheless, the association allows these facts to go unpunished and does not apply the legally established measures against the violators. The Saransk "Elektrovypryamitel" Production Association unjustifiably refuses to deliver instruments of the class required by customers. Some ministries tolerate this situation.

There are also examples of good contractual work and of the careful monitoring of the execution of contracts. USSR Ministry of Chemical and Petroleum Machine Building has not only ordered subordinate enterprises to properly conclude contracts for 1987 but also to establish a schedule for the examination of the results of every ten-day period of the month. Soyuzglavarmatura [Main Administration for Pipeline Fittings and Ventilating Equipment] and other soyuzglavsnabsbyts have participated directly in this important work. This is positive experience and it must be disseminated.

Stable economic relations are required for the smooth, rhythmic functioning of enterprises. The inadmissibility of downward adjustments of production plans has already been indicated. While such adjustments have become fewer, structural changes are nevertheless often still made in the product mix. If they are associated with industry's reaction to the changing demand of customers, if they are directed toward expanding the production of economical, progressive types of products needed by the customer, they should be welcomed. But unfortunately changes in the product mix are made to the detriment of the customer. During 9 months of last year, while the overall sales volume plan was surpassed, industry undersupplied customers for 58 out of the 161 most important products, i. e., an undersupply of more than one-third. The

consequences of this are clear to everyone. Much more attention must be focused on the correct formulation--with due regard to the customers' demands--and unconditional fulfillment of product mix plans and obligations.

It will be necessary to increase the responsibility of fondoderzhateli not only for the timely but also the well thought out, substantiated distribution of allocations, that does not require numerous changes in plan acts. This work is not being conducted at the proper level. According to the data of Soyuzglavarmatura, issuance of warrants for products by that main administration for the year 1987 was complete at the beginning of October. However, there followed more than 2300 changes in warrants for the delivery of cast iron and nonferrous metal fittings and in group warrants for the delivery of steel fittings.

It is very important to secure the conclusion of contracts for the delivery of products in the full volume specified in production plans and in the issued warrants. As is known, in previous years many suppliers tried to reduce the size of orders already filed. This was a particularly frequent practice of enterprises belonging to the USSR Ministry of Heavy Machine Building, USSR Ministry of the Electrical Equipment Industry, and a number of other ministries. By lowering the volume of deliveries compared with the plan, suppliers have created conditions making it easier to fulfill their contractual obligations. This has led to the jacking up of the plan fulfillment indicator and the amount of material rewards, to the incomplete utilization of the production potential. On the whole, however, this works to the serious detriment of the national economy.

Such a practice has been sharply condemned. Today, when suppliers evade the conclusion of contracts for the delivery of products and goods in the quantity duly specified in plan acts, products and goods for the delivery of which contracts have not been concluded are reflected in reports as undersupplied.

What is meant by the evasion of the conclusion of contracts? It means not only the unsubstantiated refusal of suppliers to establish economic relationships with specific buyers that have been issued plan acts but also the lowering of the volume of deliveries under contract against the plan in the event customers or fondoderzhateli refuse the products allocated to them, concerning which the suppliers say nothing. Contracts are concluded for less than the total planned volume and fondoderzhateli delay the distribution of allocations for a long time. Suppliers are obligated to report such cases to the organ issuing the warrant before the commencement of the planned delivery period (quarter) in order that it would be possible to redistribute the products, to use production capacities to fill other orders if they exist.

The new Instructions on the Procedure for Accounting the Fulfillment of Delivery Targets and Obligations, which were approved by USSR Gossplan, USSR Gossnab, the USSR State Committee for Labor and Social Problems, USSR State Statistical Administration, and All-Union Central Council of Trade Unions (which replaced the 1981 instructions), stipulate that suppliers must submit the pertinent information no later than 15 days before the beginning of the quarter. Breach of this condition will be regarded as the evasion of the conclusion of contracts and as the undersupply of the ordered product. This

procedure also extends to the fondoderzhateli. After all, if distribution is not carried out on schedule, they may lose the right to the allocations because the products will be redistributed.

New, high demands are made on the warrant-issuing organs, especially on the soyuzglavsnabsbyts. They have the obligation to examine the potential for additionally increasing the utilization of production capacities as a result of the issuance of warrants and the possibility of matching new customers to suppliers. If there are no customers for the products indicated in the plan, under the established procedure, the question of removing the products from production and of using the liberated capacities to expand or organize the production of products that are in demand must be decided jointly with the ministries.

In accordance with the decisions of the 27th CPSU Congress, flexible forms of material-technical supply will be widely developed under the 12th Five-Year Plan. This refers primarily to wholesale trade in producer goods and direct long-term economic relations between manufacturing and customer enterprises. The advantage of these forms is that they are closely connected to economic methods of management, that they expand the autonomy and increase the responsibility of enterprises and organizations for resource supply, for the rational utilization of raw materials, supplies and other products.

Since 1987, enterprises belonging to individual ministries as well as scientific research, design, and experimental enterprises and organizations have been converted to supply on a wholesale trade basis (without warrants and limits). Such an approach to the determination of the circle of customers that are converted to wholesale trade is primarily associated with the accelerated utilization of advances of scientific-technological progress. More than 10 billion rubles' worth of products are to be sold this year in wholesale trade. By the end of the five-year plan, this volume will increase 7-9-fold primarily as a result of the conversion of more than 60,000 customers to this progressive type of supply.

Territorial organs of USSR Gossnab are guided by the Statute on Wholesale Trade and the Model Contract of Organization of Supply on a Wholesale Trade Basis. On the basis of these documents, they conclude long-term documents with all their customers. The documents specify the procedure, the deadlines for submitting and filling orders, and other necessary conditions. The supply of enterprises and organizations that are customers for the products is unstable and is based on yearly, quarterly, monthly, or one-time orders without long-term contracts. Provision is made for rendering customers additional services, including the preparation of products for productive consumption.

The transition to the new methods of management requires the improvement and increased effectiveness of contracts concluded on the basis of direct economic ties. Under the 12th Five-Year Plan, the volume of deliveries based on direct ties will grow by more than 12 percent compared with the previous five-year plan and will amount to 51 billion rubles a year. More than 12,000 customers

and 6700 suppliers of more than 3200 products have been converted to direct ties to date. Most enterprises have concluded long-term contracts prior to the beginning of the five-year plan.

The Novolipetsk Metallurgical Combine, for example, delivers more than 60 percent of its metal products on the basis of direct ties to all its customers that have been converted to such ties (the combine has more than 300 such customers) and concluded contracts prior to the beginning of the five-year plan.

The Magnitogorsk and Nizhniy Tagil metallurgical combines and the Moscow Tire Plant concluded contracts in good time for the delivery of products on the basis of direct ties.

The Solikamask Pulp and Paper Combine delivers more than 90 percent of the products it sells to its more than 500 customers on the basis of direct ties.

There are examples of effective long-term cooperation between suppliers and customers operating on the basis of direct ties involving a broad range of production management and scientific-technological problems, and the rational and economic utilization of material resources.

Nevertheless, the situation with the development and especially with increasing the effectiveness of direct long-term economic ties is still unsatisfactory.

We have not by any means used all the possibilities for expanding them. The disruption of stability is a serious obstacle to the development of direct ties. Both ministries and soyuzglavsnabsbyts must work in earnest to eliminate this substantial shortcoming. Nor can we be satisfied with the qualitative aspect of many contracts that are concluded by enterprises, by their failure to make full use of the rights granted to them, and by the insufficient influence of customers on the formulation of detailed production plans.

Legal-contract services could do a great deal to improve the quality of direct ties. They must analyze in depth the reasons why the contract mechanism is not being sufficiently used to secure the more complete satisfaction of the national economy's need for a high quality product mix, for promoting the rhythmic operation of enterprises, and for making contracts play a more active role.

Special attention must be devoted to the radical improvement of product quality, to accelerating the introduction of advances of science and technology into production, and to the elimination of expenditures of materials and labor on the production of ineffective, unduly material-intensive, obsolete products. In order to do so, we must make more active use of a broad complex of economic, organizational, technical, education. and legal means.

This is the task confronting ministries, soyuzglavsnabsbyts and all enterprises and organizations.

USSR Gossnab has forbidden soyuzglavsnabsbyts to issue warrants for the delivery of obsolete products that are not in demand and has ordered that they be replaced by high-quality products that the national economy needs. This work is being conducted together with ministries and enterprises by Soyuzglavelektroapparat [Main Administration for Electrical Equipment], Soyuzglavbum [Main Administration for Pulp and Paper Production], Soyuzglavtsvetmet [Main Administration for Nonferrous Metals] and other soyuzglavsnabsbyts. However, not all material-technical supply organs are withstanding the onslaught of suppliers attempting to sell low-quality products. There are also cases when soyuzglavsnabsbyts refuse to issue warrants for products that are not in demand, but the suppliers, instead of reacting sensitively to the customers' demands and organizing their production activity on the basis of the customers' interests, maintain that there are not enough warrants for them to use their production capacities to the fullest.

I shall cite an example. Three times in 1986 Soyuzglavmetall [Main Administration for Metal Production] called upon the USSR Ministry of Ferrous Metallurgy to sharply curtail the production of galvanized sheet steel at the Dnepropetrovsk Metallurgical Plant imeni Komintern because it did not meet the demands of the GOST [all-union state standard] and because customers were refusing to buy and use it. The ministry already has enterprises that are producing galvanized steel using the most sophisticated technologies. They are the Cherepovets, Magnitogorsk and Nizhniy Tagil metallurgical combines whose products are in high demand. However, the Dnepropetrovsk plant was in no hurry to restructure. Not until the fourth quarter of 1986 was the quota for producing galvanized steel reduced by 2000 tons due to the lack of customer demand.

Owing to the poor quality of a number of products and refusals by customers to accept the products, the output of the Tbilisi Electric Welding Equipment Plant imeni Lenin of the USSR Ministry of the Electrical Equipment Industry, the Lvov Paint and Varnish Plant of the USSR Ministry of the Chemical Industry, and a number of other enterprises was not entirely covered by warrants.

Ministries must take immediate action in such cases.

The decree of the CPSU Central Committee and the USSR Council of Ministers "On Measures for the Radical Improvement of Product Quality" increased the responsibility of manufacturing enterprises for satisfying customer demands on product quality. The decree authorizes the customer to unilaterally rescind the contract if the delivered products are of inferior quality. In such cases, ministries have the obligation of immediately assigning customers to other suppliers guaranteeing the quality of their products.

Substantial demands are made on supply and sales organizations. In the process of concluding contracts with manufacturing enterprises, they must safeguard the customers' interests and must prevent the purchase and subsequent delivery of inferior products to them. Unfortunately these demands are still not observed everywhere and the result is justified reproaches by the customers in some cases and the accumulation of unsaleable resources in

territorial organs' warehouses on the other. The result is the lowering of the level of material-technical supply and economic damage to the national economy.

One of the urgent questions is the delivery of products in small lots, in quantities lower than the minimum shipping norms. In its decree "On Improving the Organization of Deliveries of Small Lots of Producer Goods in the National Economy," USSR Gossnab approved the Procedure for Organizing Deliveries of Products in Nontransit Quantities. In accordance with the Statute on Deliveries and this Procedure, customers receiving products in quantitities no lower than the minimum shipping norms are assigned directly to suppliers. In the case of decentralized warrants, these questions are decided by territorial organs of USSR Gossnab which also determine the form of supply--transit or warehouse depending on the volume of shipment to specific customers.

Considerable difficulties usually arise when the order is centralized and when group warrants are issued to ministries and departments by soyuzglavsnabsbyts for all the products allocated to them for subsequent distribution. As is known, fondoderzhateli frequently allot small quantities of products to customers in violation of norms governing minimum shipments.

The new procedure obligates suppliers to determine on the basis of the counterwarrants of ministries and departments the overall volume of products that should be shipped in small lots to customers that are located in the region of activity of each territorial organ of USSR Gossnab. The manufacturer must specifically conclude delivery contracts with the latter. Territorial organs and organizations that are subordinate to them in turn conclude contracts with customers based on extracts from the fondoderzhatelis' counterwarrants. Our supply and sales organizations deliver products on the basis of these contracts.

The newly introduced procedure requires an attentive and responsible approach to the conclusion of contracts, to the organization of deliveries of products to small customers. Much depends here on the organization of the work of both industrial suppliers and our enterprises. Some territorial organs may have difficulties due to the shortage of warehouse space. Territorial organs have been instructed to carry out the necessary preparatory work in connection therewith. They should negotiate with interested enterprises, if required, the lease of warehouse space belonging to them or to build new capacities on a share basis with associations and plants situated in the same region. It is important that ministries and departments carry out corresponding organizational work.

The further conversion of customers to the decentralized issuance of warrants for goods through territorial organs of USSR Gossnab would promote the positive resolution of the problem. This would permit their more flexible and rational supply with due regard to the customers' demands and regional conditions.

This year, five industrial union ministries, a number of large associations and enterprises belonging to other ministries, the USSR Ministry of the Maritime Fleet and USSR Ministry of Trade were converted to full cost

accounting, self-financi g and self-support. All industrial branches and transport have begun ope ating under the new conditions of management. Proposals on the conversion of organs belonging to the USSR Gossnab system have been drafted and approved. As is known, the rights and economic autonomy of enterprises are presently being further expanded within the framework of centralized planned management with the aim of determining the basic directions and proportions of development of the national economy and of accelerating scientific-technological progress on the basis of the technical retooling of branches.

Each enterprise and organization must now restructure its work in order that economic factors would operate in full measure in order that all available resources and every earned ruble would be used rationally. In all this, major importance belongs to the true enhancement of the role of the contract as the legal means of securing the cost acccunting interests of enterprises and organizations within the framework of the State Plan for the Economic and Social Development of the National Economy.

CSO: 1820/15
5013

KOLKHOZ, SOVKHOZ, APK ENTERPRISE INTERRELATIONS FAULTED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 5, May 87 pp 37-41

[Article by V. Stukach, candidate of economic sciences: "The Things Which Are Impeding the Improvement of Interrelations of Sovkhozes and Kolkhozes with APK Partners]

[Text] The CPSU Program states the proposition: "By developing centralized principles in management and planning and in resolving strategic tasks, the party will actively implement /measures to raise the role of the basic production link/ [phrase in slantlines printed in boldface in text]--associations and enterprises--and consistently follow a policy to expand their rights and economic independence... Operational-management work should be concentrated locally--in labor collectives."[1] Life demonstrates that when this provision of economic policy is disregarded by organs of management, difficulties arise for enterprises and associations and breakdowns occur in the economic mechanism of management. Analysis of the work experience of the rayon agro-industrial associations of the virgin lands region of Kazakhstan in recent years confirms this.

What are the difficulties in sovkhozes and kolkhozes today? Why is production efficiency increasing so slowly? A principled answer was given to these and other questions at the 27th CPSU Congress. The CPSU Central Committee and USSR Council of Ministers decree "On Further Refinement of the Economic Mechanism of Management in the Country's Agro-Industrial Complex" was adopted; this decree acknowledged that a set of measures to refine the economic mechanism of management was needed, that new methods of planning and economic incentive on the basis of progressive standards must be extensively introduced, that the rights of kolkhozes, sovkhozes, and other enterprises and associations of the agro-industrial complex in solving economic questions must be expanded, and that the incentive and accountability of labor collectives and all links of management for intensifying production, utilizing the achievements of scientific-technical progress, and insuring high final results must be increased.

Practical work to shift to a qualitatively new level of management and to correct shortcomings is being done everywhere. But in order to accomplish that, the nature of the difficulties hindering the successful work of agro-industrial associations, sovkhozes, kolkhozes, and other enterprises and

associations of the APK must be analyzed. Of course, all breakdowns in the work of the economic mechanism are related to such causes as imperfect planning, unbalanced exchange of goods and services, divergence of the economic interests of the partners, incompatibility of their rights and responsibility, and others. In everyday practice these discrepancies are most sharply reflected in the work of the lowest link of the APK--sovkhozes, kolkhozes, and others.

In 1985 the Tselinograd Agricultural Institute did a study on interrelations with partners in the rayon agro-industrial association; 76 directors of sovkhozes and 8 chairmen of kolkhozes of Kokchetav, Kustanay, Pavlodar, North Kazakhstan, Turgay and Tselinograd oblasts took part as experts. Each expert, based on the particular conditions of his farm, was obliged to formulate the most acute problems and contradictions which arise in interrelations with partners in the APK when selling grain, potatoes, vegetables, livestock and poultry, milk, wool, and eggs to the government and selling raw hides and vitamin-herbal powders. Moreover, the managers of farms have shown conflict in interrelations with partners regarding procurement of equipment, spare parts, and repair materials and production-technical services. The conclusions drawn from the results of the expert evaluation make it possible to characterize the condition of the economic mechanism in the agro-industrial complex.

Above all when examining interrelations of sovkhozes and kolkhozes with Kazakh SSR Ministry of Grain Products enterprises many managers noted that the practice which has become established of charging for grain delivered against the state plan makes selling output on a "field-to-elevator" basis unprofitable. This leads to increased irrational transportation and inefficient utilization of additional capital investments for developing the material base of sovkhoz and kolkhoz threshing floors and the drying system. Some experts pointed out shortcomings of an organizational nature in interrelations with grain acceptance enterprises: during acceptance the grain quality is understated--by doing so the purchasing agent receives additional profits and the farm loses them. Most farms are forced to send their own representatives to monitor the accuracy of the amount of grain determined.

Organizations managing procurement from sovkhozes and kolkhozes of potatoes and vegetables have too little economic incentive to accept high-quality output. Procurement organizations do not ship potatoes and vegetables promptly and disagreements often arise because methods of determining the amount of output are not perfect. It is significant that many managers consider procurement organizations' inadequate material interest in accepting output promptly as well as the low power of the material base for keeping and processing potatoes and vegetables the main obstacle to improving the work of these organizations. Analysis of the utilization of centralized RAPO [rayon agro-industrial association] funds to develop production capacities of organizations involved in procuring, selling, and processing potatotes and vegetables shows that things are not going well in that regard.

Of the directors of sovkhozes and chairmen of kolkhozes taking part in the study, 17 percent noted that farms are not always rationally coupled with meat processing enterprises so additional transport of livestock is needed. When

livestock is delivered in so-called "peak" periods, livestock is allowed to be held over at preslaughter bases and meat combines for 3-5 days and the live weight per head of cattle declines by 15-20 kilograms and by 3-5 kilograms per head of swine; with delivery outside the oblast (this applies to many farms in Kustanay, Turgay, and Kokchetav oblasts) losses during transporting and waiting periods are even greater. Transport distances reach 600-700 kilometers.

Organizational problems when delivering livestock cause particular dissatisfaction among managers of farms. One out of three mentioned violations of acceptance schedules and 23 percent of the experts named the causes which compel farms to send workers to unload livestock and guard the output while the carcasses are cut up. The directors of sovkhozes and chairmen of kolkhozes consider it necessary all the same to set up a system whereby livestock would be accepted by procuring agents directly at the farm.

In evaluating the state of farm milk sales, most of the managers believe that work to establish direct ties between farms and processing enterprises must be accelerated everywhere. Adopting measures to increase the incentive of dairy industry enterprises to accept high quality output is especially important. Of those surveyed 20 percent mentioned cases of reduced quality of milk at acceptance; because of this farms were forced to send their representatives to monitor. But with acceptance of milk directly at the livestock unit and final determination of the amount there, these difficulties would fade. The managers of farms expect enterprises to build enough instruments to rapidly and precisely determine the quality of milk.

Of unsolved questions many name the lack of rhythm in providing calves with skim milk returned from the dairy plant.

Representatives of kolkhozes and sovkhozes which sell wool to the state note that only one side, the primary wool processing factory, determines the amount of raw material primary processing of wool, and it is not done at the moment of acceptance. They propose changing this system.

The worst bottleneck is procurement of raw hides which many farms hand over haphazardly and without a plan. Their quality is also evaluated in a one-sided manner--by the representative of the procurement office of the consumer cooperative. Farm specialists do not have methods for determining quality. Because of low prices for raw materials farms have no economic interest in improving the matter. Many self-critically confess that the main culprit for the reduced quality of raw materials is the farm since raw materials are not collected, are not preserved, and are stored without observing the rules of technology.

The system of interrelations of sovkhozes and kolkhozes with the rayon's engineering services is especially complicated but has an appreciable effect on the production process. More than one-third of the managers were dissatisfied with the quality of capital repair of tractors, vehicles, assemblies, and units performed by specialized repair enterprises. The number of tractors, vehicles, assemblies, and units sent to repair plants is frequently planned in accordance with the capacities of repair enterprises

rather than the needs of farms. It still happens that services are reduced to sending out scarce spare parts and filling out documents for repair supposedly performed. Doing capital repair is more desirable than fulfilling contracts for technical servicing of equipment and substantially cheaper. Industrial methods of repair of heavy tractors at repair plants with complete disassembly and without taking into account actual wear increases expenditures and complicates work to introduce the collective system and cost accounting [khozraschet] in primary labor collectives.

As for agrochemical services, they do not fulfill their commitments to kolkhozes and sovkhozes fully, since they do not have an adequate material base, transport capacities, and storage facilities to keep fertilizers. Frequently the services performed by these offices cost farms more than if they had performed the work on their own. Relations with the RAPO power engineering services office are just as complicated. About one-third of the managers of farms named low quality of preventative work, violations of schedules for servicing assemblies, and failure to keep records of the electricity consumed by subdivisions as shortcomings. For these reasons the reliability of the power supply declined at a number of farms and the cost of operating the system rose.

At the overwhelming majority of sovkhozes and kolkhozes engaged in construction by the in-house method, the construction program is not provided with construction materials. Contract organizations (where they exist) do not put capacities on line in time and do not insure high-quality construction. Many disagreements with planning organizations are observed regarding planning estimates for new construction. Directors of sovkhozes note the complexity and awkwardness of financing procedures in Gosbank departments; because of it financing is covered only in the second quarter and before that farms cannot obtain construction materials.

The above-cited results of the expert appraisal of the problems and contradictions of sovkhozes and kolkhozes in interrelations with partners in the agro-industrial complex system confirm that the economic mechanism and the structure of management are not perfect. In many cases sectorial and departmental interests predominated over national economic interests and frequently even conflicted with them. Many problems could be solved by the efforts of workers in the rayon management link, but since their material and moral incentive and evaluation of the apparat's activities have not been made directly dependent on the economic results of enterprises and organizations under their jurisdiction, they have not given the proper help.

In turn, not concerned about self-support [samookupayemost], sovkhozes have not shown a principled approach in protecting their interests in interrelations with service enterprises and organizations and with enterprises which procure agricultural output and raw materials. Relations have not always been equitable and mutually beneficial. While there are a number of normative acts guaranteeing the rights of farms, sovkhozes and kolkhozes have rarely resorted to using the legal mechanism to protect their economic interests.

To a certain extent centralized RAPO funds could alleviate the acuteness of problems in interrelations of partners of agro-industrial associations. However, at the present time people do not resort to using them when trying to solve intersectorial production problems. Thus, in the last 2 years production development funds were not spent at all at 75 percent of the RAPO's in the north Kazakhstan, Kokchetav, and Tselinograd oblasts.

In analyzing the results of the study conducted as well as progressive experience in the region, certain results can be summarized and general features characteristic of rayon agro-industrial associations which are doing a good job can be identified. RAPO councils are doing everything necessary to insure the economic independence of enterprises and organizations which are RAPO members. Economic and legal principles of regulating relations are being rationally combined. Those opportunities and conditions are being created by which it is economically beneficial, specifically beneficial rather than ordered by a higher ranking management organ, for each enterprise and organization to perform its functions. And there is another important condition: measures are being taken to guarantee that all RAPO participants have legal protection for their independence and initiative. The regular personnel of the apparat of agro-industrial associations are being reinforced.

Recently the structure of management at all levels is being refined and a new mechanism of economic operations is being created: the agro-industrial complex is planned and managed as a unified whole and the organizational, economic, and legal prerequisites for uniting the economic interests of all spheres of the agro-industrial complex are being created. In connection with this the inclusion in the draft of the USSR Law on the State Enterprise (Association) of the provision that the higher ranking organ is obliged in all its activity to insure conditions for the efficient work of the enterprise, strictly observe the rights of the enterprise and help realize them fully, and not interfere in its operational-economic activity is fully justified. This will help establish business-like relations among farms, the RAPO apparat, and partners in the APK. The provision on accountability for losses to the enterprise as a result of fulfilling the instructions of the higher ranking organ which violated the enterprise's rights and gave it these instructions will also be of benefit.

Now, during the period of restructuring, work is being done most intensively in the following directions:

the efficiency of centralized supervision of the realization of the USSR Food Program is being increased. The role and independence of the RAPO, sovkhozes and kolkhozes, and enterprises and organizations and their interest and accountability for achieving the highest results on the basis of real cost accounting, self-support, and self-financing and establishment of direct dependence of the level of incomes of collectives on work efficiency is being raised;

the shift to economic methods of management and supervision is being carried out at all levels and planning, the financial-credit mechanism, the price-setting system, and material-technical supply are being refined;

organizational restructuring of the structure of management is being carried out--this makes it possible to take into account progressive trends of concentration, specialization, and cooperation of production and the development of interfarm formations.

Planning and management of the agro-industrial complex as a unified whole insures the optimal combination of sectorial and territorial management, comprehensive economic and social development, and expansion of the rights of sovkhozes and kolkhozes in managing construction by interfarm enterprises and in managing the social and production spheres.

Practice shows that many contradictions in interrelations of sovkhozes and kolkhozes with enterprises and organizations which are partners in the APK are being eliminated very slowly. A certain "burden" of negative departmentalist traditions reinforced by the workers of the former management apparat has accumulated.

In connection with the new tasks the composition of RAPO apparats must be reinforced with skilled personnel and a system for selecting, locating, and training workers must be formulated. It is now necessary to expand the use of computer equipment in management on the base of creating automated work places. It is time to introduce a system of efficient analysis of economic information on the activities of sovkhozes, kolkhozes, and other enterprises and organizations which belong to RAPO's. Data on production efficiency, labor productivity, and consumption of the main types of resources per unit of output must be envisioned in the system of indicators of efficient analysis. This will enable the cost-cutting mechanism in production to be controlled and indicators of efficiency to be used when evaluating work.

It is important to focus the attention of RAPO councils and apparat planning-economic services on using the resources of all enterprises and organizations belonging to the association more rationally and solving intersectorial problems to mutual benefit; and to raise the significance of centralized funds for strengthening and developing the material base of interfarm enterprises and organizations as well as of those service enterprises which are holding up the work of the agro-industrial association as a whole.

FOOTNOTE

1. "Materialy XXVII syezda Kommunisticheskoy partii Sovetskogo Soyuza" [Materials of the 27th CPSU Congress], Moscow, Politizdat, 1986, pp 148-149.

12424
CSO: 1824/266

ECONOMISTS ON FURTHER IMPROVEMENT OF APK ECONOMIC MECHANISM

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 5, May 87 pp 92-100

[Article by V. Boyev, director of VNIESKh [All-Union Scientific Research Institute of Agricultural Economics] and academician of VASKhNIL [All-Union Academy of Agricultural Sciences imeni V.I. Lenin], and I. Ushachev, deputy director of VNIESKh and doctor of economic sciences, under the rubric "Our Discussions":"Refining the Economic Mechanism of the Country's Agroindustrial Complex"; The article by VASKhNIL academician V. Tikhonov, "The Concept of Radical Restructuring of the APK Economic Mechanism," was published in No 4 of PLANOVOYE KHOZYAYSTVO for 1987. The editorial office continues discussion of the questions posed by the author; phrases enclosed in slantlines printed in boldface in text]

[Text] The further refinement of the economic mechanism in the agroindustrial complex at the present stage is one of the most important conditions and factors for increasing the efficiency of agroindustrial production, utilizing resource potential more fully, and successfully realizing the national Food Program. The task is to set up and adjust a mechanism of economic operations which would insure coordinated and precise functioning of all links of the APK and obtain high final national economic results.

/This requires the development and theoretical substantiation of an integrated system for the APK economic mechanism/; this system must explain the economic activity of this complex without contradiction. A no less important task is to search for procedural and practical forms for realizing the fundamental scientific principles. However, up to this point no unified concept of the economic mechanism has been created and proposals to refine it are for the most part fragmentary and contradictory. And as a rule they lack a precise statement of the entire problem and their theoretical and organizational-practical aspects are not differentiated by structure and content. Some underestimate the importance of the theoretical prerequisites and others--the practical prerequisites of the economic mechanism. Therefore, the article by VASKhNIL Academician V. Tikhonov, "The Concept of Radical Restructuring of the APK Economic Mechanism," in which the tasks are precisely formulated and the main part of the article--the theoretical part--stands out graphically, is very timely and topical.

It seems to us that on the whole the author takes correct scientific positions. He was especially convincing in developing the analysis of the shortcomings of the existing mechanism of economic operations, and above all its main link--planning, from a theoretical standpoint. As for the proposals for realizing the theoretical premises he advanced, they did not receive sufficiently complete treatment in the framework of the article under discussion. Moreover, questions of refining the organizational mechanism and the mechanism of planning itself were hardly treated at all. The article merely indicated ways to realize the scientific concept in practice. Possibly the author did not even formulate such a task. Be that as it may, the reader does not form an integrated idea of the proposed economic mechanism in the APK and of the solution to this two-fold problem. Developing a system of practical measures focused on further refining the organizational mechanism for managing the APK seems very important, especially from a practical standpoint. /Above all the organizational-production and management structure of the APK must be put in order/ at the rayon and oblast levels. This structure should have the least possible number of links of production and management in order to resolve tasks facing the APK of the given region. As usual the kolkhozes and sovkhozes, as well as industrial-type agricultural enterprises--poultry plants, complexes for fattening swine and cattle, hothouse combines, agricultural firms, and others--remain the main production links in rayon agriculture. At the same time sectorial and intersectorial agroindustrial production associations and combines, including those on the rayon and interrayon scale, as well as agroindustrial cooperatives, are becoming widespread. These formations must be endowed primarily with functions of economic supervision on the basis of extensive utilization of economic methods and continued democratization of management under the authority of the councils of these associations. /As for the functions of state management (land use regulation, quarantine, environmental protection, and the like), it would be wise to put them under the jurisdiction of the ispolkoms of the rayon Soviets of People's Deputies./

The organization of /production systems/ on a sectorial and intersectorial basis is given an important place in the work to refine the structure of production in the agroindustrial complex. Each of the sectorial systems as a rule specializes in the production of certain types of agricultural output. As for intersectorial production systems, they must not only specialize in the production of certain agricultural products but in processing them as well (for example, milk and other dairy products). Kolkhozes and sovkhozes can be part of the systems with respect to those of their activities which directly involve production of the given output. The organizational forms of production and management of the APK's in the rayon and oblast examined do not exclude the possibility of other forms as well.

Transferring specialists from the technological services offices to economic contract terms with the farms they serve will help cut costs for maintenance of the administrative apparatus. These technological services offices can in time be formally organized as rayon cost-accounting centers for introducing scientific-technical progress. Organizing the extensive introduction of the achievements of science and progressive know-how as well as holding consultations on certain questions of agroindustrial production can be entrusted to the specialists of these centers.

One of the main directions for improving the activities of the organs of management is /precise differentiation of tasks and functions/ on the vertical and on the horizontal and assurance of better interaction and coordination among them in decision-making work. And the management apparat of these organs must be oriented to resolving the main task of the APK--all-out acceleration of the socioeconomic development of agriculture and other sectors associated with it on the basis of extensive introduction of the achievements of scientific-technical progress. For these purposes all management organs of the USSR Gosagroprom [State Agroindustrial Committee] must revise and ratify statutes on structural subdivisions and official instructions for managers and specialists. At the same time a precise system of interaction of each enterprise and organization with the corresponding rayon and oblast organs of APK management must be developed.

Work to centralize certain production and management functions, in particular those concerning transport, agrochemical, engineering-technical, legal, and other types of services, should continue.

At the present time a unified intersectorial system is being developed for computer-information support of the agroindustrial complex; it comprises a set of model solutions for various types of agroindustrial activity committee, a data base, software and hardware, and organizational-legal documents which enable reporting, planning, and normative information to be formulated, stored, and processed numerous times.

The main feature and advantage of the collective-labor organization is the high level of democratization of management which should be based, on the one hand, on broad rights and operational independence of labor collectives in solving production and social questions, and on the other, on utilizing various forms of enlisting working people in production management. In the interests of expanding the democratic foundations of management by enterprises and their internal subdivisions, election of managers is being introduced; this strengthens one-man management, increases the authority of managers, and in addition raises the accountability for the work in the APK and creates an atmosphere of high demands and high standards in each collective. It would be wise to more extensively practice a /competitive system/ of filling specialist positions.

At the same time at APK enterprises and organizations organizational structure must be brought into conformity with the development of democratic foundations of management and broad introduction of the collective contract and internal cost accounting. To do this certain levels of this structure and links of management must be reduced, the transition to shop (sectorial) structure must be carried out, and the number of management personnel must be reduced by including them in cost-accounting contracting subdivisions.

The strengthening and deepening of the integration between sectors of the APK under the impact of scientific-technical progress makes searching for adequate organizational forms of management necessary. It makes sense to in time /include/ enterprises and organizations of the USSR Ministry of Land Reclamation and Water Resources, USSR State Committee for Forestry,

USSR Ministry of Grain Products, and other departments of the APK in the Gosagroprom system. That is the reason the corresponding adjustments must be made in the Gosagroprom structure; this will increase this organization's intersectorial management functions and promote structural differentiation of specialized subdivisions for performing the indicated functions.

V. Tikhonov's concept quite convincingly describes the many merits of the commodity-money mechanism. However, it is examined separately from another no less important part of the economic mechanism--centralized planning and management. And the idea of activating market relations by weakening centralized elements runs through it. In our opinion, the question is /not to contrast/ the advantages of the cost mechanism and the shortcomings of administrative, noneconomic forms of management in general, but /to search for the optimal combination/ of the two key levers of influence on increasing the efficiency of agroindustrial production. That is why it is difficult to agree with the author who asserts that "... this mechanism 'works' where all noneconomic coercian is absolutely precluded," which is tantamount to rejecting state management.

The thesis of the possibility that the organization itself can ensure stable operation of the APK economy exclusively through the commodity-money mechanism of self-regulation is debatable: "The intensity of deviations levels off when the monitoring functions of the consumer are increased and increases when these functions become weaker." First, here the author tries, though not in obvious form, to solve a strictly management problem without management proper. After all it is well known that insuring the steadiness and stability of the development of the agroindustrial complex is one of the main tasks of its management system. Secondly, the free treatment of such management categories as "monitoring," "regulation," and others which occurs prevents the material presented from being understood corectly. It is difficult to explain to the reader just what monitoring is being referred to: monitoring of the quality of the output delivered or the activity of the suppliers. The consumer can monitor the quality of the output but cannot monitor the activities of its supplier, since they are on one horizontal level and their relations are "client--contractor" and "supplier--consumer" relations rather than "management--subordinate" relations.

Thirdly, the negative consequences which will inevitably appear when the cost mechanism is introduced in refined form are clearly underestimated somehow: under- and overproduction of output, abrupt release of work force, and other cyclical phenomena. Without developing and introducing a reliable and efficient protective mechanism to guard against these destabilizing factors, the problem of stable development of agroindustrial production canot be solved; although there is no doubt that even without a "protective mechanism" the average level of growth in the APK economy will rise substantially.

The article /does not sustain the systems principle/ advanced in its introductory, theoretical part. For example, the literal equation of the national economic plan with the sum of the plans of its structural links or even social needs with the simple sum of individual needs does not fully conform to that principle.

In our opinion the planning system proposed by the author is too aggregated; consequently, one cannot trace the precision of its operation, especially at lower levels.

Centralized planned regulation of the development of the APK should be carried out using primarily economic methods. Union, republic, oblast, and rayon organs of state management are formulating plans of APK development and the economic conditions and standards of economic operations corresponding to them. /Economic standards are becoming the main instrument of planned management./ Deliveries to centralized Union and republic funds as well as subsidies from them should reach the agroindustrial committees of Union and autonomous republics, krays, and oblasts in summary terms with the basic products (grain, meat, milk, butter) singled out. The remaining sum is used for concluding contracts with organizations which receive the output. The allocation of additional material-technical resources is correlated to the increase in deliveries to these funds. The volume of output needed to fulfill plans for deliveries into centralized funds and satisfy local demands is distributed in the form of a state order among processing enterprises and procurement and trade organizations.

/The volumes of production and sale of output to the state are determined by the kolkhozes, sovkhozes, and other agricultural enterprises independently./ The total volume of sales of output to the state in cost terms must not be lower than what was reached on the average in the preceding five-year plan period, while the increase (decline) in material-technical resources must insure an increase (reduction) in the output sale plan in accordance with the unified standards of resource yield ratified by the agroindustrial committee. To do this enterprises independently formulate the order for material-technical resources and determine the increase in the volume of state purchases. The assortment and amount of agricultural output being sold to the state are specified when contracts are concluded with procurement and processing enterprises.

/The following should be applied:/

to agricultural enterprises--the procedures used in industry for evaluating economic activity to fulfill the sale plan taking into account commitments to supply output according to the products list (assortment) and the specified quality, and at the given time, in accordance with the contracts concluded and the job authorization adopted for execution;

/to all types of agricultural output--the procedures for selling up to 30 percent of the planned volume at contracted prices/--and the enterprises and organizations assigned the functions of state purchases (procurement, trade, and processing) and company stores of USSR Gosagroprom should be allowed to purchase this output at those prices.

It would be wise:

--/for enterprises of the processing industry/ to sell /up to 30 percent of the planned volume of output/ to state and cooperative enterprises and organizations through company stores and kolkhoz markets /at contract prices/.

--for state trade enterprises to have the right to buy and sell output of the processing industry /at contract prices/.

--for the oblast agroindustrial committee to send output being sold by oblast enterprises and associations to Union and republic funds /at contract prices/.

The production program of processing and procurement enterprises and organizations is formulated on the basis of the state order for deliveries to the Union and republic funds, locals needs in accordance with trade requests, and volumes of sale of output in company stores.

Material-technical supply to APK enterprises and organizations is to be carried out /through the system of wholesale and retail trade without ceilings and general schedules of allocations/. Scarce expensive resources are to be sold by contracts concluded previously.

Enterprises and organizations dealing in production-technical servicing (repair, transport, agrochemical, and others) and construction enterprises and organizations are to shift to full cost-accounting. Their activities are determined by economic contracts with clients for rendering services (introducing projects, finishing jobs) without bringing in ratified plan indicators. And the RAPO [rayon agroindustrial association] establishes tariff and price lists for their jobs and services (including capital repair).

The /wage fund/ for all enterprises and associations /is planned and formulated independently/ on the basis of distribution of gross income.

In order to expand the rights and increase the role and responsibility of enterprises and organizations of the oblast agroindustrial committee system for carrying out capital construction, it should be established that the volume of capital investments, construction-installation work, and launching of fixed capital and production capacities are determined by kolkhozes, sovkhozes, and other enterprises based on the financial resources of farms (including budget appropriations being allocated and the financing of certain measures and means obtained from the centralized reserve fund). Long-term USSR Gosbank credits, the volumes of contract work agreed upon with construction organizations, and contracts for construction materials and equipment, as well as decentralized purchases of local construction materials are taken into account here.

Ceilings on project planning, contract, and construction-installation work and volumes of deliveries of construction materials are set for nonproduction projects.

The assertion in V. Tikhonov's article that in contemporary conditions prices are the basis of the economic mechanism of the national economy, including the

APK, is beyond a doubt. For various reasons there are more unsolved than solved problems in price setting today. That explains the atten ion now being devoted to it. In determining the directions for refining agricultural prices, Academician V. Tikhonov begins from unconditional recognition of expenditures under relatively poor biological conditions of production or, as people now often say, long-run marginal costs [zamykayushchiye zatraty] as the social value and objective base for setting prices for agricultural products.

Theoretically such a position is based on recognition of the fact that under commodity production it is precisely in this way that social value is formed, regardless of the socioeconomic content and character of market relations. And it is based on the fact that with prices set on such a basis, it is enough to change rent payments to put all farms in equal economic conditions for production activity.

The formulation of the question is clearly not a new one. Despite the seeming clarity and simplicity, the concept for setting prices for the long run is not being realized in practice. Refining agricultural prices in the country with numerous deviations (when setting prices for particular products) goes on in a different way, /along the path to acknowledge objective reproduction expenditures by zones and rayons where their purchases are planned/; in other words, /through recognition of the real value basis of price/. The logical development of this practice in recent times is /to shift to a normative-resource base for planning output purchases,/ expenditures to obtain this output, payments into various funds, and the profits and profitability of production. This appproach opens up broad possibilities for organically linking the process of refining purchase prices with real conditions and the socioeconomic development of production, insures realization of the reporting and cost-accounting functions of prices, and makes it possible to stimulate territorial specialization of production and increase output quality, that is, to resolve the particular tasks stemming from the demands for effective operation of the economic mechanism of management and highly efficient planning and management decisions; the economic independence of enterprises and associations; and direct interest and accountability for achieving high final results.

Cost is an objective category. /Worse and better conditions of production and the labor expended at kolkhozes, sovkhozes, interfarm enterprises, and personal plots of kolkhoz members, workers, and employees/ influence the amount of the cost for particular agricultural products obtained in the country. In recent years in the process of refining territorial differentiation of prices and converging purchase and delivery prices and using them when purchasing output in the public economy, the unity of the formation of social value and the equivalency of exchange has found recognition among kolkhoz members, workers, and employees. This mechanism for forming social value will obviously be preserved in principle in the immediately foreseeable future.

If one follows obvious logic, the assertion of poor production conditions as the social value of individual expenditures of labor deprives equivalency of exchange (the cornerstone of commodity-money relations) of an objective economic base and means recognizing socially necessary expenditures (labor,

fuel, and other resources) as social norms and component elements, that is, those norms which in most rayons of the country will orient production to extensive management of the economy and are therefore already unsuitable for extensive practical use. One must take into account that relatively poor conditions of production for some products are at the same time better for others, and territorial expenditures for obtaining necessary products will also differ by 3-4 times in the immediately foreseeable future.

Using uniform, clearly too high prices for agricultural products for most farms, even in specialized zones of commodity production, is not in keeping with the interests of efficient management of affairs. Using these prices complicates the possibility of using accounting and contract prices which as a rule are an important tool for regulating economic interrelations with interfarm cooperatives and resolving a number of other tasks; increases the discrepancy between purchase and retail prices; and causes a substantial increase in market prices with all the undesirable consequences stemming from it. Taking into account the socioeconomic importance of price-setting, these questions should not be ignored and underestimated. It must be mentioned that the fact that in many rayons and farms from 35 to 50 percent of the unearned income obtained will have to be withdrawn when their proposals are realized in practice does not disturb the adherents of using uniform prices and rent payments. One would have to be a great optimist not to see the economic and social complexity of such regulation of production.

In contemporary conditions recognition of the priority of national economic interests and cost-accounting independence of enterprises, which makes it possible to operate on the principle of self-financing, is basic in the theory and practice of planned price setting. Its consistent realization will enable the suitable volume, structural, and territorial indicators of output production, resource support, and socially justified standards of reproduction expenditures to be taken into correct account. It is in this capacity that the reporting, cost-cutting, and incentive functions of prices can fully reveal themselves; this is of paramount importance for insuring the steady economic and social development of the APK.

It can be assumed without exaggeration that /the discrepancy which has taken shape over a long period of time between certain types of prices and reproduction expenditures and between prices and the effect from using industrial means of production in agriculture (because of the physical-value ties of production, exchange, and consumption)/ cannot be eliminated by raising or lowering prices for certain products even within relatively small regions. A balanced revision of the entire system of planned prices and tariffs with a one-time specification of the role of various types of markups (discounts), credit, taxes, direct budget investments, and special conditions for recovering production costs is necessary.

/A coordinated conception of the economic mechanism which corresponds to the present stage of development of the socialist economy and a uniform methodology of planned price-setting created with consideration for the interests of insuring material-value balance in production and for the demands of balanced exchange and accelerated scientific-technical progress/ must be

made the foundation of this reform. This reform can be made ready by the end of the current five-year plan period if the appropriate attention is given it.

The preparation of this reform does not exclude operational adjustments on the level of existing purchase prices and cash markups. Thus, in the immediate future purchase prices for cattle, sheep, and wool and for oil-bearing and legume crops should be changed and the cash markups for products being realized by low-profit and unprofitable farms should be specified. /Markups on prices (as a temporary measure for leveling production earning power) should not be paid to farms which are doing a poor job but to farms which are in objectively poor natural-economic production conditions./

When proposals to refine prices are being developed, it should be taken into account that the main shortcoming of the practice of price-setting was the long-term preservation of unsound differences in the profitability of producing the main agricultural products, which in the final analysis was reflected in unjustified differentiation of profitability of production and and the economic status of farms.

Even after the changes in the level of purchase prices implemented in recent years and the introduction of cash markups, the profitability of certain products of agriculture fluctuated from 3 to 128 percent in 1986. There were repeated differences in the profitability of the production of kolkhozes and sovkhozes of certain republics and zones in the country. That is a result of the influence of many factors, including the shortcomings which were tolerated when substantiating the level of prices and in the value proportions of exchange. In these conditions it would naturally be impossible with any price model to insure the necessary price balance and create favorable economic conditions for normal production-finance activity on an expanded basis.

At the present time in order to establish a sound level of purchase prices which would enable kolkhozes and sovkhozes to operate on the principle of self-financing, the amount of net income included in the prices must be increased to approximately one and one-third its actual level. This /speaks of the fact that the process of refining agricultural prices must not only be based on substantiating the rational model and structural elements of prices but on refining the intersectorial proportions of use of surplus product and developing and implementing a system of effective measures focused on making output cheaper/--the main source for obtaining net income based on improving the use of land, funds, and other resources and extensively introducing intensive technologies and cost-accounting.

And there is one other question. When the subject is refining purchase prices taking into account the need to insure relatively equal profitability of production and, accordingly, expenditures, one should proceed from the demands of insuring the operation of production on an expanded basis on the principles of self-support [samookupayemost] and self-financing, rather than from a mechanical leveling of profitability, since this leveling can be equally high and low. This /accounts for the paramount importance of correctly formulated sectorial and aggregate standards of profitability as applied to various structures and zones of agricultural production/.

As experience shows, intensification of agriculture does not eliminate, and in a number of rayons even increases, annual fluctuations in production of grain and other products related to the influence of the weather; this has a negative effect on the economy of a substantial number of kolkhozes and sovkhozes. Inasmuch as many rayons of the country, especially Siberia, Kazakhstan, the South Urals, and the Volga Region, cannot in the future count on eliminating annual fluctuations in yield, gross harvests, and prime cost of output and consequently profitability of production, it would be wise to implement a number of organizational-economic measures capable of increasing the stability of agricultural production, in addition to developing land reclamation and increasing farming sophistication. In particular, insurance for crop failure should be improved, reserve funds of seed and feed should be increased, and flexible purchase prices should be introduced. In years with unfavorable weather conditions, when gross harvests decline substantially, expenditures per unit of output rise, and production profitability falls, output should be purchased at higher prices (15-20 percent higher as compared to the average stable level). In favorable years lower prices would operate in order to prevent changes in prices resulting in additional expenditures of the state to purchase particular amounts of output.

As was noted, the adjustments being proposed can be implemented within the limits of prices which have become established (sums of payments), in other words without appreciably redistributing the state's financial resources to benefit the APK, which was the traditional reason even obvious shortcomings in the level and correlation of prices endured. Such changes oriented to take account of the cost-accounting conditions of production would make it possible to subsequently implement reform of the economic mechanism with fewer adjustments of prices.

The general theoretical principles of the development of the economic mechanism in the APK have been examined here and proposals given to further refine the system of management, planning, and price-setting. However, such elements of the economic mechanism as finance-credit relations, material incentive, and others require special consideration taking into account the sectorial and territorial peculiarities of the operation of the agroindustrial complex.

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CSO: 1824/265

DEVELOPMENT OF PRIVATE PLOT POTENTIAL STRESSED

Moscow SELSKAYA ZHIZN in Russian 16 May 87 p 2

[Article by V. Ryabov, chief of the Sector for Private Plots and Collective Horticulture of USSR Gosagroprom: "Full Utilization of Potential"]

[Text] The private economy has been and continues to remain an important component of our agriculture. It is being carried out by approximately 36 million rural families. Available for their use -- 5.7 million hectares of sowing area, or 2.7 percent of the country's sowing area. Each year the population is allocated more than 5 million hectares of natural haying land and approximately 11 million hectares of pasture land for the grazing of livestock and for the procurement of hay.

Within the country's agro-industrial complex, the socio-economic importance of the private economy is based upon the fact that it makes a considerable contribution to the all-union food fund and it makes it possible to utilize more efficiently the labor resources of the rural population and also land areas and other means of production not being utilized fully in the public economy.

One fifth of the cattle, hogs, sheep and goats and one third of the overall number of cows being maintained at all categories of farms are being maintained on the private plots of rural inhabitants. On the average, there are 70 head of cattle (including 38 cows), 40 hogs, 99 sheep and goats and approximately 1,200 head of poultry for every 100 private plots.

In 1986, 25 percent of all agricultural products (in a value expression) were produced on private plots. This sector accounts for 27 percent of the all-union production of meat, milk and eggs, 55 percent of the potatoes and 28 percent of the vegetables. For the most part, these products are used for the private consumption of the rural families. The private plots supply food for roughly 110 million persons. The rural population in the Ukraine satisfies fully its needs for potatoes and eggs, for milk -- 92 percent, meat -- 81 and vegetables, fruit and berries -- 85 percent.

Decisions handed down by the party and government in recent years and especially the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Further Improvements in the Economic Mechanism for

Management in the Country's Agro-Industrial Complex" have become the foundation for development of the private plots. They have stimulated work aimed at strengthening this sector of our economy. The relationships between the private plots on the one hand and the kolkhozes, sovkhozes and procurement organizations on the other have become more complete and effective and the assistance being provided to the private economy has become more noticeable. Last year, the state allocated 4.1 million tons of mixed feed for privately owned cattle and the plans for this year call for this fund to be increased to 5.5 million tons.

The Latvian and Belorussian SSR's and many oblasts in the Russian Federation and the Ukraine are setting fine examples in furnishing business-like assistance to the private economy. Experience accumulated in Grodno, Omsk, Lvov and a number of other oblasts reveals that improvements in the private economy produce not only an economic effect but also a social one, since they serve to weaken the migration of the rural population and to stabilize the labor collectives.

At the same time, the present status of the private economy is not revealing the full potential of this sector of the rural economy. As yet, the trend noted in recent years towards a reduction in the number of privately owned livestock has not been overcome. Thus, although the number of all types of animals on rural private plots in 1986 increased in Chita, Chelyabinsk and a number of other oblasts in the RSFSR, for the republic as a whole the number of cattle declined by 2.1 percent, cows -- by 2.3, hogs -- by 1.9 and sheep and goats -- by 1 percent.

Of special concern is the fact that one third of the rural families generally do not have domestic animals. For every two village plots there is less than one cow on the average and 69.5 percent of the families do not have hogs. The most unfavorable situations in this regard are found in Armenia and Moldavia.

The principal cause for this situation are the difficulties being encountered in acquiring feed and quite often this underscores a lack of attention being given to the needs of private animal husbandry by the leaders of kolkhozes, sovkhozes and local soviets. In Bryansk, Smolensk and some oblasts in the Ukraine and Belorussia, the members of kolkhozes and sovkhoz manual and office workers are experiencing difficulties in acquiring young pigs. The rural population is experiencing a shortage of light mechanization equipment, construction materials and transport services.

All of these difficulties can truly be overcome provided genuine concern (not just in words) is displayed for developing the private plots. Unfortunately, a large number of RAPO's [rayon agro-industrual associations], kolkhozes and sovkhozes are still not devoting proper attention to this problem. We are still encountering many examples of shocking irresponsibility on the part of kolkhoz administrations and sovkhoz managements in carrying out the contracts concluded by them with the owners of private plots. We are still encountering incidents of a negative attitude being displayed towards those engaged in the private economy. This is being manifested in various types of regulations concerning the structure of the areas under crops on private plots, including prohibitions against the shipping of products and the grazing of livestock.

The time is at hand for renouncing such "methods." Each family capable of producing its own food products should be provided with everything required to do so. Each individual who wishes to sell his own surplus products should be provided with assistance in doing so. Only such an approach will ensure a harmonious combination of the interests of an individual family and society on the whole.

Belorussian Measures

Minsk SELSKAYA GAZETA in Russian 5 May 87 p 2

[Article by V. Mikulich, deputy chairman of the Presidium of the BSSR Supreme Soviet and chairman of the republic Committee for Developing the Private Plots of Citizens: "Support Needed for the Private Plots"]

[Excerpt] Our party and state, in addition to developing public production, are attaching considerable importance to the private plots for carrying out the Food Program.

Last year, for example, the private sector produced approximately 30 percent of the republic's entire gross agricultural output, including meat -- 23 percent, milk -- 28, eggs -- 66, wool -- 40, potatoes 46, vegetables -- 38 and fruit and berries -- 89 percent.

However, as noted by the Bureau of the Central Committee of the Communist Party of Belorussia in March of this year, by no means is full use being made of the potential available for increasing the production of meat, milk and other products in this sector. The soviet and economic organs in a number of oblasts and rayons have still not drawn the proper conclusions from the instructions handed down by the CPSU Central Committee and the government of the USSR and they are not attaching sufficient value to the role being played by the private plots of citizens in augmenting the food resources.

Many local party, soviet, trade union and komsomol organizations, RAPO's [rayon agro-industrial organizations] and kolkhoz and sovkhoz leaders and specialists are not carrying out the required organizational and explanatory work among the population and they are not providing adequate assistance aimed at ensuring that each rural family utilizes its private plot more efficiently, maintains livestock and poultry and produces greater quantities of animal husbandry and plant husbandry products. To a large degree, this has led to a situation in which, at the beginning of this current year, the number of domestic livestock, including cows, had declined by 14 percent compared to 1980, hogs -- by 6, poultry -- by 1 percent. It is a fact that today one out of every four private plots in the republic does not maintain livestock. Forty one percent of the private plots do not have cattle, 44 percent -- cows, 34 -- hogs and 93 percent -- sheep.

What were the specific causes which brought about these unpleasant statistics? The population's requirements for young cattle, hogs and poultry were satisfied to only a weak degree. Serious miscalculations were tolerated in the matter of making feed available for the domestic livestock and also in the

availability of zootechnical and veterinary services. For example, last year the feed expenditures on private plot per standard head of cattle amounted to roughly 28 quintals of feed units compared to a norm of 36. Many families are awaiting assistance in the planting an harvesting of potatoes, tillling the private plots, tending the crops and fruit and berry plantings, providing chemical protection for the plants against pests and diseases and so forth.

In the interest of stimulating the work of developing the private plots, the Bureau of the Central Committee of the Communist Party of Belorussia handed down a decision calling for the creation of a republic committee consisting of representatives of the party, soviet, trade union and komsomol organs and also workers attached to Gosagroprom [state agro-industrial committee], Gosplan, Belkoopsoyuz and the TsSU [Central Statistical Administration] of the BSSR. Such committees have been created attached to oblast and rayon executive committees and also village and settlement soviets headed by the chairmen of executive committees. They are obligated to display concern for creating the conditions required for the maintenance of livestock and poultry and intensifying the production of agricultural products on private plots and the sale of their surplus products to kolkhozes, sovkhozes and consumer cooperation and at markets.

The committees of the village and settlement soviets commenced their work with a tour of the private plots. As a result, they were able to take not of the wishes and opportunities available to each family for maintaining livestock and poultry and to measure the requirements for fertilizer, seed and planting stock, young animals and poultry and feed. After obtaining a clear picture, the committee must develop a specific program.

What important features are called for in this program? Where and what amount of private plot land should be included in the crop rotation plan fields? Use must also be made of the recommendation for an additional allocation of 0.15 hectares of land for raising feed for those private plots which are fattening and selling cattle and hogs to the state and consumer cooperation on a contractual basis. Concern must be displayed for satisfying completely the population's requirements for vegetable and forage crop seed, seedlings, young fruit and berry plants and for strain exchanges in potatoes.

The time is at hand for eliminating the faulty practice, which is being repeated year after year, of not making sufficient quantities of feed available for the livestock. As yet, the haying and pasture lands being made available as a rule are small in area and of low productivity. The population is not interested in improving them, since the tracts are being made available for one-time use and not for an extended period of time. During the summer, usually only 0.1 hectare of pasture land is being made available for cow against a minimum requirement of 0.35-0.5 hectares.

Thorough concern must also be displayed for the efficient use of pastures, for ensuring rotational grazing and grazing by portions with the aid of electric fencing, timely mowing and fertilizer top dressings, the installation of watering areas, cattle runs and the use of mineral additives. New approaches are needed for carrying out hay procurement work. In all areas, the

population should be allocated tracts in a manner such that up to 70 percent of the hay can be obtained with the first cutting.

The experience of the Neman Kolkhoz in Stolbtsovskiy Rayon, the chairman of which is Yulyan Petrovich Tsvirko, is rather interesting in this regard. Here highly productive pastures are being made available for the cattle -- not less than 0.3 hectares per cow. The distant pasture method is being introduced for their use. The livestock are also being ensured feed for the winter. Three tons of coarse feed are being issued per cow, with the hay being delivered in bales. It is not surprising to learn that the private plots of kolkhoz members are producing a considerable quantity of products, with the surplus amounts being sold to the state. In 1986, 2,446 kilograms of milk from each cow and an average of 98 kilograms of meat per plot were purchased. All of the products sold are being traded for grain forage.

On the whole, with the exception of individual farms, improvements are needed in the purchases of surplus milk and meat from the population on a contractual basis, especially by consumer cooperation.

There are still many private plots which are experiencing serious shortages in concentrated feed. As is known, the BSSR Council of Ministers, on the basis of a special decree, recommended that the kolkhozes and sovkhozes issue up to 9 percent of the gross yield of grain to kolkhoz members and manual and office workers as payments in kind. However, no support was forthcoming for this recommendation. In 1985, for example, throughout the republic as a whole, only 130,000 tons of grain were issued in the form of payments in kind -- roughly 2 percent of the gross yield and in such rayons as Minskiy, Lepelskiy, Postavskiy and others -- 0.3-0.5 percent. A similar situation prevailed last year.

Measures implemented by republic and other committees also called for support for the private plots in the form of young stock for highly productive strains of cattle, hogs, sheep and poultry and improvements in zooveterinary services for the animals, artificial insemination and in the mating of cows and hogs. This work is acquiring special meaning at the present time. The task has been assigned: each family in a rural area must maintain a hog and poultry. And by 1 July 1988, the plans call for the number of hogs to be raised to 150 head and poultry -- to 1,500 head for every 100 private plots. By this same date, the number of plots having cows must be increased in all areas to not less than 5 percent.

Many farms have actively joined in carrying out these tasks. I would like to mention the experience of the Vileyka Stayki Sovkhoz, which is headed by Nikolay Vladimirovich Moyskiy. Here the purchases of livestock, poultry, milk and other products from the population is not carried out spontaneously but rather on the basis of bi-lateral agreements.

Last year, for example, 136 hectares of private plot land were included in the sovkhoz's crop rotation plan. Additionally, the villagers were allocated on a contractual basis 7 hectares of land for growing feed for the purpose of fattening and selling livestock and poultry to the state. Two thousand tons

of organic fertilizer, 10,000 tomato seedlings, 50,000 cabbage seedlings, 1,697 young pigs and 8,000 chicks were sold to the population

This approach in carrying out the work is producing perceptible results. During a year's time, 168 tons of meat were purchased from private plots -- 64 kilograms per plot and 793 tons of milk -- 1,566 kilograms per cow.

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CSO: 1824/267

CORN SEED, CROP DEVELOPMENT IN THE UKRAINE

Odessa Oblast Spring Field Work

Moscow SELSKAYA ZHIZN in Russian 3 Apr 87 p 1

[Article by A. Soldatskiy, SELSKAYA ZHIZN correspondent: "Following a Heat Wave"]

[Text] Odessa Oblast--The machine operators in the Black Sea region long ago moved their equipment up to the initial positions and still this year's spring period has not made its presence known. Nevertheless the sounds of spring are becoming increasingly more audible. Everyone is aware that the future harvest is dependent to a considerable degree upon the schedules for carrying out the spring field work. And this work begins immediately following the first heat wave.

"The machine operators resolved to make full use of each good hour of time" stated the 1st secretary of the Kiliyskiy Rayon Party Committee V.B. Bodelan, "a positive role must be played by two organizational factors: the conversion of all production subunits over to a contractual basis and equipment operation using the flow-line cycle method."

This year the grain growers in this rayon resolved to harvest an average of 50 quintals of grain per hectare. Such a goal is not an easy one here. Last season, for example, 68 percent of the grain crops were grown using the intensive technology and the increase in winter wheat per hectare amounted to 14.8 and corn -- 18.5 quintals. This experience is being employed in all areas, with maximum use being made of elements of the intensive technology in the cultivation of all winter crops in behalf of this year's harvest. Fine seedlings have appeared over the entire area.

"True, the winter barley did not survive the winter in all areas, particularly where there were windy days and the temperature dropped to lower than 20 degrees" stated the chairman of the Rassvet Kolkhoz K.I. Chumachenko, "but we have already succeeded in resowing these fields with spring barley. This year the decision has been made to strive to obtain 60 quintals of grain per hectare. The corn growers have undertaken to achieve an even higher goal -- 65 quintals."

They have been awaiting spring for a long time on this farm and they have made thorough preparations for it. But it was not until the last days of March that they moved their equipment out onto the fields. In the process, the machines were not all moved out onto the strips simultaneously -- a watch literally had to be established in each sector and the soil ripening process had to be monitored. The principal operations were started on Sunday, with machine operators I. Gazhanov and A. Makon commencing the cultivation work. Simultaneously, the detachments of V. Solodovskiy and I. Koval commenced sowing their spring barley and oats and they completed this work literally within a matter of several hours.

It was possible to place the seed in the soil in this manner owing to the fact that the fields entered the winter in a levelled off and loose manner. So as not to lose moisture and in order to avoid packing the soil unnecessarily, efforts are being made at the kolkhoz to combine the technological operations.

Other farms in the rayon are carrying out their field work in the absence of slow preparations, on a selective basis and along a broad front. At the Kolkhoz imeni Lenin, for example, a pea and oats mixture was sown over 150 hectares on the very first day. The machine operators at the Kolkhoz imeni Kutuzov required several hours for sowing the seed for their pulse mixtures, barley and oats. Soil preparation work is being carried out at a maximum tempo at the Ukraina, Rassvet, Put Lenina and other kolkhozes.

Special control is being exercised over the winter crop sowings throughout the rayon. They are being grown on 15,000 hectares. And although they were all planted following good predecessor crop arrangements and on fields which were topped off with fertilizer in the autumn, nevertheless a decision was made to apply a top dressing in the spring. Today, all preparations have been made for employing the root method for applying nitrogen fertilizer, with aviation assistance expected for the irrigated plantings.

A great deal has been accomplished on the farms with regard to raising the return from irrigated lands -- the planned yields have been achieved in almost all areas. This year the plans call for another progressive measure to be taken -- increases are being planned for the grain and forage crop yields. On the very first day out on the fields, an undersowing of alfalfa was carried out on fields having sparse grass stands. Trenching and applications of top dressings for perennial grasses are being carried out on all fields.

The rayon's farmers have learned how to obtain high yields of corn silage bulk. However, the quality of the feed remains low owing to the fact that the plants were planted too densely in the rows. Ears do not form when this sowing method is employed. This year the decision was made to change the technology such that the inter-row spacings would be 45 centimeters rather than 70. This means that more plants will be grown per hectare but they will not be as crowded.

This method was employed in the form of an experiment on a large field. Last year, corn was grown under irrigation using a 45 centimeter inter-row spacing and a yield of 800-900 quintals of fodder was obtained per hectare. Soybeans

are also now being sown using a 45 centimeter inter-row spacing and this, in combination with other agricultural measures, is making it possible to raise its yield to 35 quintals per hectare.

Nor are the farmers in Kiliyskiy Rayon the only ones carrying out field work at the present time. The farms in Tarutinskiy, Razdelnyanskiy, Kominternovskiy and Reniyskiy rayons have commenced turning over their moisture, sowing their grain and forage crops and carrying out cultivation work. The work front is expanding with each passing day.

Hybrid Corn Seed Production

Moscow SELSKAYA ZHIZN in Russian 16 May 87 p 1

[Article by I. Germakovskiy and A. Soldatskiy: "Corn Hybrids Are Being Grown Again in the "Chayka" and "Dnestr" Systems]

[Text] Odessa - Ternopol oblasts--Today there no longer can be two opinions regarding whether or not it is necessary to expand the corn growing areas. This crop possess high potential possibilities. From irrigated and even non-irrigated lands, many brigades and teams are obtaining 100 and more quintals of corn grain per hectare.

Nevertheless, its productivity is still low throughout the country as a whole. There are many reasons for this. Included among them are violations of the agricultural practices and imperfections in the harvesting equipment. However, the specialists are of the opinion that the chief cause of low yields is poor seed quality.

The corn yields can be raised a minimum of 25 percent merely by improving the production of hybrid seed. This is clearly borne out by the experience of specialized scientific-production seed production associations in Moldavia and Dnepropetrovsk Oblast. A need exists for creating similar associations in other regions in the southern part of the country.

For example, let us take Odessa Oblast -- one of the largest producers of hybrid corn seed in the Ukraine -- where up to 60,000 tons of such seed are procured annually. Upon recommendation by the gosagroproms [state agro-industrial committees] for the USSR and the Ukraine, the decision was made here to create the large Chayka production system. A constituent meeting was recently held. The Buyalykskiy Corn Processing Plant was selected as the leading enterprise.

The participants in the constituent meeting discussed thoroughly the legal norms for the future association. Many disputes arose. But truth emerges from a dispute. However, all concerned were rightfully surprised by the unexpected decision on the part of the directive organs of the Ukraine -- commencing this year, a change is taking place in the trading of mixed feed for the sale of hybrid seed. Instead of 300-400 kilograms of mixed feed, only 60 will now be allocated per quintal of seed.

At the same time, the fact that the system created in Odessa Oblast has been granted complete economic independence is deserving of approval. It will be able to establish direct contacts with suppliers and consumers and with scientific-research institutes and other organizations. Measures have been developed for issuing material incentives to farms for the quality of their seed. The plans also call for fines and sanctions to be imposed against institutes for supplying initial strains of seed of low quality.

Farms included in the Chayka system have commenced their work. The sowing of this valuable crop is being carried out in all areas.

Seed production is being carried out in Ternopol Oblast using the new method. An intensive labor team at the Iskra Kolkhoz was one of the first in Zaleshchitskiy Rayon to complete its corn sowing operations.

"A chief concern has been that of planting coated seed as rapidly as possible no deeper than 4 centimeters and packing the soil using flat rollers" stated team leader V. Shengera, "we are sowing 18-20 hectares daily against a norm calling for only 14-16. All efforts are now being directed towards organizing thorough tending of the plants and obtaining not less than 35 quintals of hybrid first generation seed from each of 267 hectares."

This is not an easy task given the conditions of this year's prolonged and cold spring period. However, the experienced specialists operating on a contractual basis are confident that the results planned will be achieved. Their confidence stems from the fact that they will receive assistance from the Dnestr Scientific-Production System. Created at a local sovkhoz technical school, it unites the corn growers of the neighboring Zaleshchitskiy and Borshchevskiy rayons. This system has concluded contracts with the Moldavian Scientific-Research Institute of Corn and Sorghum of the Gibrid Scientific-Production Association and with the Trans-Carpathian, Chernovtsy and Cherkassy agricultural experimental stations for joint work in studying and testing parental forms of regionalized and promising corn hybrids and strains and also for cultivating seed. The production-ecological testing of 40 hybrids will be organized. This year the system will supply the country's farms with seed for the Bukovinskiy 35, Kollektivnyy 244, Moldavskiy 330 and Yubileynyy 60 hybrids.

"The chief task of the system will be that of improving the technology for cultivating first generation seed" emphasized the deputy chairman of the Zaleshchitskiy RAPO [rayon agro-industrial association] for field crop husbandry I. Marusyak, "Concern is being displayed in this regard by the farm scientists and specialists and by those intensive labor teams operating on a contractual basis."

On fields of the Dnestr System, the intensive labor teams are completing their sowing of hybrid corn on 2,355 hectares and they are commencing their tending of the plants.

Technology for Grain Corn Cultivation

Kiev PRAVDA UKRAINY in Russian 22 Apr 87 p 3

[Article by L. Anishin, scientific worker at Gosagroprom for the UkSSR, honored agriculture worker of the UkSSR and Candidate of Agricultural Sciences: "Departure From a Stereotype." First paragraph is source introduction]

[Text] This year the republic's farms are expanding their corn sowings to 3 million hectares. The task has been assigned of obtaining not less than 12 million tons of grain -- almost twice as much as the average annual amount produced during the preceding five-year plan. In order to realize this goal, maximum use must be made of the achievements of scientific-technical progress. The experience of past years has convincingly shown that one large reserve for raising productivity and increasing the gross grain yields for this crop, in regions of the republic characterized by a limited amount of warmth, is that of converting over to the all-round technology for corn cultivation, developed by the scientific institutes of Gosagroprom [State Agro-industrial Committee] for the UkSSR.

The Agrokompleks Program calls for an expansion, by the end of the 12th Five-Year Plan, in the area for the introduction of this technology for the cultivation of grain corn and silage in the forest steppe region and the forest district of the UkSSR to 1 million hectares. According to data obtained from a five-year check (1982-1986), organized at oblast state agricultural experimental stations in these zones, with equal dosages of fertilizer and reduced labor expenditures, the all-round technology, compared to the generally accepted cultivation methods, makes it possible to raise the grain corn yield by 9-10 quintals and fodder -- by 90-120 quintals per hectare and to lower the production costs by 16-20 percent.

This technology includes a complex of elements aimed at achieving more complete utilization by the plants of the early spring solar radiation, natural heat resources, supplies of moisture, soil nutrients and the biological characteristics of corn. Whereas when use is made of the conventional methods, the sowing is permitted in soil warmed to 10-12 degrees, today an average daily temperature of 6-7 degrees is adequate. This makes it possible to commence the sowing of corn one and a half to two weeks earlier. The seed is planted at a depth of only from 2-3 to 3-4 centimeters, that is, 2-2.5 times less than the traditional depth and this creates favorable temperature conditions for seed germination and for considerably more complete utilization of the potential for growth and development of the seedlings. On the whole, the all-round technology has approximately 20 distinctive characteristics. Its development and introduction came about mainly owing to the fact that many of the traditional corn cultivation methods conformed only weakly to the soil-climatic peculiarities of the forest steppe region and the forest district and are restraining an increase in the production of this most important grain and silage crop.

Owing to a deficit of warmth in these zones, grain corn did not ripen over considerable areas and in some western and forest district oblasts the sowings of this crop for grain purposes are no longer being planned..

In 1986, in accordance with the new all-round technology, this crop was cultivated on many farms in 11 oblasts. Many kolkhozes and sovkhozes possess three and four years experience in its use. The results speak for themselves. Over a period of 4 years at the 40 Rokiv Zhovtnya Kolkhoz in Vasilkovskiy Rayon in Kiev Oblast, the productivity of seed corn on a hybridization tract 150 hectares in area increased by almost twofold. In 1986, 57 quintals of 1st generation hybrid seed was obtained here and each of 124 hectares of marketable sowings furnished 101 quintals of forage grain. For the third year in a row, the farm is over-fulfilling its plans for the sale of corn seed by a factor of 2-3, the profitability of this production has reached 511 percent and the profit from the cultivation of seed corn amounted to 360,000 rubles.

On average over a period of 6 years, the Sovkhoz imeni XXV CPSU Central Committee in Goshchanskiy Rayon in Rovno Oblast obtained 77 quintals of grain and almost 700 quintals of fodder with ears per hectare as a result of use of the all-round technology. And prior to this the sowings of grain corn on the farm did not ripen and the fodder productivity was almost two times lower. The average grain corn yield for Rovno Oblast over a four year period increased by a factor of 1.5 and reached 53.8 quintals per hectare. Last year, 405 quintals of fodder per hectare were obtained here from an area of 52,000 hectares -- 2.3 times more than the average for the 10th Five-Year Plan. Use of the new technology over a period of two years on farms in Khmelnitskaya Oblast increased the corn grain yield by a factor of 1.3, reaching 44.1 quintals per hectare. In Khmelnitskiy Rayon, it reached 56.1 quintals and at the Ukraina Kolkhoz in Gorodokskiy Rayon -- 109.8 quintals per hectare.

The all-round technology aids in increasing the availability to the crops of additional total amounts of active temperature on the order of 200-300 degrees and more. In combination with other factors, this increases the intensity of growth and development in the plants. Last year, on many farms in Rovno, Ternopol, Kiev and Cherkassy oblasts, the corn seedlings cultivated using the new method appeared 15-20 days earlier than usual. And they ripen 1-2 weeks and in a number of instances -- 17-20 days earlier. The harvesting moisture of the grain from such sowings as a rule is lower and this reduces the expenditures for its drying and storage.

Notwithstanding the fact that the technology has its own complications (raised exactingness with regard to the observance of technological discipline, the sowing periods often coincide with the sowing of beets and other early crops), the number of its supporters continues to increase. Last year the Cherkassy oblagroprom [oblast agro-industrial committee] carried out an extensive check on the all-round technology. It turned out that even under drought conditions the grain yields exceeded those obtained from controlled sites by 7-12 quintals and the fodder -- by 100 quintals.

Accumulated experience has convincingly shown that this new method promotes stabilization in the production of ripe corn grain even in those western and forest district oblasts which for decades were considered to lack promise for

corn cultivation owing to a shortage of warmth. A notable step was taken in this direction at Volynya. The cultivation of grain corn is being revived in Lvov, Zhitomir and some other oblasts.

Despite the fact that the areas for introducing the all-round technology are still comparatively limited, it is already beginning to exert a substantial influence, in combination with the new regionalized hybrids, with regard to improving corn production in zones of the forest steppe region and the forest district of the UkSSR. It has been proven that with optimum dosages of fertilizer this crop can furnish grain yields here which are 20-30 quintals higher than cereal grain crops.

However, in the zones of the forest steppe zone and the forest district there are still many specialists who have still not formed an opinion regarding the all-round technology. In Sumy Oblast, the oblagroprom has not even ventured to organize a check on the new innovation. It is believed that extensive testing, with a refinement of certain elements, should also be carried out in the steppe zone. And the specialists of kolkhozes and sovkhozes should also be heard from in connection with this problem.

Hybrid Corn Seed Production Problems

Kiev PRAVDA UKRAINY in Russian 22 Feb 87 p 2

[RATAU item: "Advice for Seed Growers"]

[Text] Odessa, 21 February--Among the many grain production problems confronting the farmers and their partners in the agro-industrial complex, special importance is being attached to ensuring that the corn fields are supplied with good quality hybrid corn seed. The chief means for improving the cultivation and preparation of such seed were discussed during a working meeting of seed growers, scientists and corn growers -- machine operators, designers from machine building plants and workers attached to the agro-industrial complex of the Ukraine and Moldavia, which convened today at the All-Union Plant Breeding and Genetics Institute in Odessa.

During the meeting, mention was made of the serious shortcomings noted in the work of collectives at the Ukrainian Scientific-Research Institute of Field Crop Husbandry, Plant Breeding and Genetics imeni V.Ya. Yuryev, the Ukrainian Scientific-Research Institute of Irrigation Farming and other scientific institutes, where there are still only a very few highly productive corn hybrids suitable for cultivation using the intensive technology.

From year to year, the procurement plans for hybrid seed are not being fulfilled in Odessa, Kharkov, Kherson, Sumy and the Crimean oblasts. Last year the scientific-research institutes in Voroshilovgrad, Vinnitsa and Sumy oblasts did not complete their planned tasks for the cultivation of seed for parental forms of hybrids. Enterprises of the UkSSR Minkhleboprodukt [Ministry of Grain Products] are not devoting proper attention to strengthening the logistical base of the corn processing plants.

During an exchange of opinions, the machine operators expressed their dissatisfaction with the equipment being produced by the Kirovograd Plant for Agricultural Machine Building and the Kherson Combine Plant.

During the working meeting, a recommendation was made to have the gosagroproms for the USSR, the UkSSR and the Moldavian SSR and the appropriate ministries and departments eliminate in short order the bottlenecks in the production of corn seed. Measures must be carried out in each oblast which will ensure the carrying out of the planned tasks for seed production and for improving the quality of the seed. Special attention must be given to modernizing the corn grading plants in order to eliminate completely the storage of seed ears outdoors and improvements must be realized in all of the technological operations concerned with the preparation of seed.

The following individuals participated in the working meeting: section chiefs of the CPSU Central Committee N.N. Kovalenko and G.G. Seregin, the 1st secretary of the Odessa Oblast Party Committee A.P. Nochevkin and executives of the Central Committee of the Communist Party of the Ukraine and the Central Committee of the Communist Party of Moldavia, the UkSSR Council of Ministers, USSR Gosagroprom, republic organs and scientists attached to VASKhNIL [All-Union Academy of Agricultural Sciences imeni V.I. Lenin].

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CSO: 1824/269

BRIEFS

SEED PREPARATION QUALITY--Odessa, 16 Feb--All of the oblast's corn grading plants are operating under full workloads. The orders for seed are increasing and the plant collectives are striving to satisfy more completely the requirements of the farmers. The Belgorod-Dnestrovsk, Buyalytskiy, Kulindorovskiy and other grain receiving enterprises are directing special attention to the quality of the seed preparation work. All of the seed is being graded not into two, as was earlier the case, but rather into six fractions. This will make it possible to plant the seed more uniformly in the soil. And the seed is being coated in the interest of producing healthier seedlings. The corn grading plants have commenced shipping the seed to farms in the RSFSR, the Ukraine and the Baltic republics. [by A. Soldatskiy] [Text] [Moscow SELSKAYA ZHIZN in Russian 17 Feb 87 p 2] 7026

SPECIAL SEED PREPARATION--Kiev, 23 Jan--Hybrid corn seed cultivated at specialized farms in the Ukraine is furnishing assistance in raising the productivity of corn plantations. The republic's grading plants have commenced shipping seed to farmers in the Russian Federation, Belorussia and the Baltic republics. "There are more than 100 such enterprises in operation in the Ukraine" stated the deputy chief of Glavzagotsemfond of the UkSSR Ministry of Grain Products P. Demchenko, "Their collectives are devoting special attention to raising the quality of the seed grain. Thorough sorting and processing have been organized for this purpose. A technology has been introduced at a number of plants which makes it possible to "coat" the seed with a special film. With such a coating, the seed can be sown even during cold weather and in soil that has not yet ripened. Specialized plants in the Ukraine are supplying the country's farmers with more than 400,000 tons of high quality hybrid corn seed for the spring sowing. [Text] [Moscow SELSKAYA ZHIZN in Russian 24 Jan 87 p 1] 7026

CSO: 1824/269

KAZAKH LIVESTOCK SECTOR SHORTCOMINGS CAUSE PARTY CONCERN

Alma-Ata PARTIYNAYA ZHIZN KAZAKHSTANA in Russian No 2, Feb 87 pp 5-19

[Unattributed article: "Work of Republic's Agro-Industrial Complex on Increasing the Production of Animal Husbandry Products and Improving the Supply of Such Products for the Population In Light of the Decrees of the CPSU Central Committee Concerning the Kazakh SSR"]

[Excerpts] In his report delivered before the 6th Plenum of the Central Committee of the Communist Party of Kazakhstan, the 1st deputy chairman of the Council of Ministers for the Kazakh SSR and chairman of the republic's Gosagroprom [State Agro-Industrial Committee] E.Kh. Gukasov emphasized that this current year will enter our country's history as the year of the 70th anniversary of the Great October Socialist Revolution, a year in which the masses will begin to master restructuring in all spheres of life and the new approaches and criteria heard during the April (1985) Plenum of the CPSU Central Committee will become the norm for evaluating all problems concerned with socio-economic development.

Among these problems, one of the most important is that of improving the supply of food products for the population. In the system of measures for achieving this, a chief one is that of accelerating an increase in the production of animal husbandry products.

In the well known statute of the CPSU Central Committee concerning the status of affairs in animal husbandry throughout the republic, adopted on 19 August of last year, the work of the Bureau of the Central Committee of the Communist Party of Kazakhstan and the Council of Ministers of the Kazakh SSR was subjected to severe criticism for unsatisfactory management of the branch and the presence in it of stagnant phenomena.

Last year, increases were recorded in the milk yields and livestock weight increases, the plans for animal deliveries were fulfilled and the republic coped with its plans for purchases of animal husbandry products. However, the results achieved by no means indicate that there are fewer problems in the branch. To the contrary, they have become more acute and more apparent today than one year ago and our deficiencies and shortcomings in animal husbandry are more visible. The requirements imposed by the CPSU Central Committee upon the Voronezh Oblast party organization in this matter fully apply to us today.

The same blunders and the same shortcomings. This year, we can and must reinforce the positive principles which we outlined recently.

In 1986 the production volumes for animal husbandry products throughout the republic, compared to average annual production during the 11th Five-Year Plan, increased as follows: meat in dressed weight -- by 11 percent, milk -- by 7 percent and eggs -- by 12 percent. At all categories of farms, 1,286,000 tons of meat in dressed weight were produced, 4,955,000 tons of milk, more than 4 billion eggs and 105,700 tons of wool in physical weight.

At the same time, the branch fell behind considerably in satisfying the requirements for supplying the population with these products, a fact which aroused some just complaints among workers. This situation developed some time ago and we cannot correct it unless the level of animal husbandry operations on the whole is raised throughout the republic.

The reserves here are high. Judge for yourself. Last year, of the overall number of cattle sold to the state, 63 percent were in a high state of nourishment and sheep -- 31 percent. Considerable losses were experienced as a result of deliveries of sub-standard products. During 9 months of last year alone, 15 percent of the cattle and 31 percent of the sheep shipped to the state were below average and in an emaciated state of nourishment. Large numbers of cattle in a low state of nourishment continue to be received from farms in Karaganda, Pavlodar, Dzhezkazgan and Aktyubinsk oblasts and sheep -- from farms in North Kazakhstan, Tselinograd, Karaganda and Kokchetav oblasts. Only six oblasts delivered cattle the average live weight of which exceeded 400 kilograms, 8 oblasts turned over sheep weighing less than 40 kilograms and farms in Guryevsk, Kzyl-Orda and Chimkent oblast -- only 36 kilograms each.

Approximately one half of the milk being supplied by farms in North Kazakhstan, Kustanay and Dzhezkazgan oblasts is of sub-standard quality.

Over the past year, on the average, 76 calves, 93 lambs, 70 foals and 2,550 suckling pigs were obtained from 100 females and the milk yield per forage cow was 2,170 kilograms. The average daily weight increase in cattle during fattening was 410 grams, hogs -- 343 and the amount of wool clipped per sheep -- 2.6 kilograms. The quantities of meat and milk obtained using intensive technologies were extremely low. The productivity indicators for livestock on many farms and in many rayons and oblasts were considerably lower than the average indicators for the republic.

Thus, farms in Kzyl-Orda, Guryev, Dzhezkazgan and Aktyubinsk oblasts are obtaining and average daily weight increase of only 340 grams during the fattening of cattle and during the fattening of hogs in Turgay Oblast -- only 240 grams. The farms in Kzyl-Orda, Guryev and Aktyubinsk oblasts obtained less than 2,000 kilograms of milk from each cow and farms in Dzhezkazgan, Turgay and Guryev oblasts obtained less than 2 kilograms of wool per sheep.

The farms in Guryev and Dzhezkazgan oblasts obtained 50-60 calves from every 100 cows. Less than 90 lambs were obtained in Turgay, East Kazakhstan, Karaganda, Dzhezkazgan and Tselinograd oblasts. In recent years, the farms

have been guilty of not using their reserves for the production of animal husbandry products.

Great harm is being inflicted upon animal husbandry as a result of cattle losses and misappropriations. The excessive consumption of meat for intra-farm purposes is continuing. It is for this reason that all of the oblasts are sustaining losses from the production of livestock products. The production cost for a quintal of weight increase in cattle is expected to be higher than that planned by 40 rubles, hogs -- by 90 rubles and sheep -- by 40 rubles.

Meanwhile, the speaker stated that computations reveal that fulfillment of the "Animal Husbandry" program can be ensured if a number of actions are pursued: correct organization of production, the introduction of leading methods for the intensive technology, selection and breeding work and the use of sanitary measures with existing animals. Indeed, 19.2 quintals of feed units per standard head were placed in storage compared to only 17.7 quintals in 1985. On 1 January, there were 11.7 quintals of feed units from all types of feed (excluding grain forage) per standard head in the public sector, or 1.2 quintals more than last year.

However, the wintering operations are being carried out under difficult conditions on farms in a number of oblasts which suffered from the drought. In Chimkent Oblast, the availability of stall feed for the cattle is only 60 percent, in Mangyshlak -- 68 and in Aktyubinsk Oblast -- 73 percent. The availability of pasture feed for sheep in Guryev, Mangyshlak, Kzyl-Orda and Chimkent oblasts is extremely low. As a result of these and other shortcomings in carrying out the livestock wintering operations, more sheep were lost in Aktyubinsk, Alma-Ata, Dzhambul and Chimkent oblasts than was the case one year ago.

In connection with the non-availability of coarse feed for farms in Kzyl-Orda, Guryev, Mangyshlak and Chimkent oblasts, a governmental order called for assistance to be furnished to them at the beginning of the wintering operations in the form of coarse and succulent feed from other oblasts. But the shipping of the feed is being carried out in a very unsatisfactory manner and mainly owing to fault on the part of the suppliers. Throughout the entire month of July, only 90,000 tons of hay and 12,000 tons of straw were shipped, despite the fact that the task called for 235,000 and 80,000 tons respectively. The leaders in Kokchetav and Pavlodar oblasts must ensure the assistance required for the southerners in organizing the shipments of the prescribed quantities of hay for no later than the end of January.

Roughly 6,300 recreation and reading rooms, approximately 200 red yurts, more than 6,300 trade points and 3,253 medical points have been organized for the purpose of providing cultural and domestic services for farm workers during the wintering period at kolkhozes and sovkhozes throughout the republic. In addition, a motor vehicle train with mobile shops and domestic services specialists is available in each oblast for providing services for distant pasture animal husbandry operations. However, On many farms in Karaganda, Pavlodar, Ural and other oblasts, proper attention is not being given to

ensuring the availability of cultural and domestic services for livestock breeders.

According to the speaker, in order to improve noticeably the supply of food products for the population, workers attached to the agro-industrial complex must tnis year raise the production of livestock and poultry in dressed weight to 1,360,000 tons and milk -- to 5,160,000 tons. Taking into account the tasks of consumer cooperation with regard to increasing meat purchases from the population at mutually agreed upon prices, the market fund can be increased compared to last year by 96,000 tons or by 17 percent.

Certainly, the assigned task is extremely tense and yet it can be carried out if the large reserves which we have at our disposal are reinforced by good organizational work.

An extensive effort must be made aimed at converting the rural population over to the fattening of cattle and hogs on the basis of family contracts. High results are being realized in those areas where this form is being employed. The established tasks for increasing the sale of young hogs and poultry to the population must be regarded as minimal in nature. We also have many other reserves.

At the same time, we must give some thought not only to this current year but also to the fact that over the next two years we must as a minimum achieve the goals established in the Food Program for meat and milk production. In order to accomplish this, we must first of all raise the responsibility of personnel at all levels for carrying out the "Feed and Protein" program.

The intensification of feed production operations must be accelerated. A sharp expansion must be realized in all of the farming zones in the sowings of peas and chick peas and sparse and old stands of grass must be repaired and renewed. Not less than one crop rotation field, or 300-400 hectares, must be employed for pulse crops on each farm. The Dzhambul and Chimkent oblast party committees and oblast executive committees must change their attitude towards increasing soybean production and the Alma-Ata Oblast Party Committee and oblast executive committee -- grain corn production. The areas being used for alfalfa, sainfoin and sweetclover are increasing in size only slowly at the kolkhozes and sovkhozes.

More attention must be given to feed preparation work. More than 3,000 feed preparation shops and feed kitchens and 159 shops for yeasting and malting are in operation on the farms. For the current wintering period, the plans called for more than one half of all of the types of feed allocated for the wintering operations to be prepared for feeding to the livestock. As of 26 December, only one tenth had been prepared since the beginning of the wintering campaign and already approximately 40 percent of the feed has been fed to the animals. This indicates that only slightly more than one half of the amount planned is being issued in prepared form.

There are 146 mixed feed plants and shops at sovkhozes and kolkhozes and they are being used in an extremely unsatisfactory manner. Last year, use was made of only one third of their capabilities. In particular, very poor use is

being made of the feed shops in East Kazakhstan, North Kazakhstan, Tselinograd and Turgay oblasts. At the same time, more than 2 million tons of grain forage are being issued in crushed and whole form and this is reducing sharply its assimilability.

The speaker mentioned in particular the importance being attached to the quality of the feed. According to estimates by chemical laboratories, last year the republic lost approximately 1.5 million tons of feed units, or almost 10 percent of the amount procured, as a result of low quality hay, silage and haylage. The cause -- mainly the dragging out of the feed procurement schedules, a problem which occurs frequently in Aktyubinsk, Ural, Guryev and Taldy-Kurgan oblasts. Last year, the equipment here had not been fully repaired prior to the start of the feed procurement work.

With regard to the availability of equipment for feed production work, there is a shortage only of silage-harvesting combines. With proper organization, it should be possible to harvest the feed during the best agrotechnical periods and with maximum protein and carotene content, as is presently being done in Kustanay Oblast.

At the present time, the situation should be thoroughly studied by each oblagroprom [oblast agro-industrial committee], RAPO [rayon agro-industrial association], sovkhoz and kolkhoz, in the interest of realizing maximum reductions in the schedules for procuring hay, haylage and silage and achieving a turning point in this work. The republic's gosagroprom [state agro-industrial committee] is organizing the production of the KSS-2.6 silage harvesting combine at its plants. The task has been assigned of producing not less than 1,500 such combines annually in Kazakhstan.

Many farm leaders and specialists blame the deliveries of sub-standard milk on tuberculosis and brucellosis. However, many sovkhozes and kolkhozes that are not troubled by infectious diseases are continuing to supply 30-40 percent of their milk as being of sub-standard quality. This is associated with violations of the elementary technological and sanitary rules. Continuous operation of the equipment must be ensured for the pasteurization and cooling of milk and for combating anti-sanitary conditions on the farms. The flow line-departmental system for milk production and reproduction of the herd is still being introduced into operations only timidly. It is being employed on less than 20 percent of the farms. The task for introducing it into operations was not fulfilled in 1986 in North Kazakhstan, Alma-Ata, Aktyubinsk, Taldy-Kurgan and Ural oblasts.

The private plots of citizens represent an important source for obtaining additional meat and milk. Last year, approximately 120,000 tons of meat in live weight and more than 360,000 tons of milk were purchased from these plots -- considerably more than the previous year. At the same time, considerable reductions have taken place in meat purchases from the population in Guryev and Semipalatinsk oblasts and milk -- in Dzhambul, Semipalatinsk, Ural and Aktyubinsk oblasts. By no means is use being made of all of the available reserves for increasing the number of private plots.

This year, planning has been introduced at sovkhozes and kolkhozes taking into account the development of both public production and the private plots of citizens residing on their territories. At the present time, approximately 30 percent of the families of kolkhoz members and manual and office workers living in rural areas are not maintaining privately owned livestock and 32 percent do not have cows. This situation must be corrected. At the same time, greater exactingness must be imposed upon the leaders of those republic ministries and industrial enterprises having subsidiary farms. Recently, there has been a reduction in the amount of attention given to them. In a number of areas, meat and milk production have declined on such farms. This has been the case in Alma-Ata, East-Kazakhstan, Chimkent and Karaganda oblasts.

The extent of tuberculosis and brucellosis among the livestock is arousing alarm. The population is maintaining many sick animals. Measures have been defined for furnishing assistance to the republic in combating this evil. Additional material resources have been allocated and plans call for the annual importing of up to 100,000 calves. As a result of measures undertaken, the number of sick animals has declined and yet the rate for this decline is considered to be inadequate. On many farms, the plans for sanitizing the herd are only formal in nature. Soviet and economic organs are exercising constant control over the carrying out of these plans. The disease rate for livestock increased in Turgay Oblast during the 11th Five-Year Plan. At the present time, the republic's gosagroprom, jointly with the oblasts, has developed schedules for the delivery of sick livestock that have been coordinated with the capabilities of the canning plants. The speaker emphasizes the need for very decisive measures in strengthening the campaign against livestock diseases, which annually result in losses amounting to tens of thousands of tons of meat and milk.

One very important problem is the rapid introduction into production operations of collective, family, brigade and individual contracts. The problem must be handled in a manner such that animal husbandry will be converted over this year only to the contractual form of payment. The experience of many leading farms reveals that in those areas where it is being employed correctly, in coordination with cost accounting and the check form of control, the desired results are appearing rapidly and effectively. Many farms, fattening sites, poultry factories and shepherd and hog-tender brigades are already operating on the basis of family and collective contracts. All other conditions being equal, they are all producing greater quantities of products, the production costs are lower and their labor productivity is considerably higher.

At the Dzhambul Poultry Factory, 22 teams converted over to family contracts. They have been combined into two brigades. Each team is assigned to tend laying hens, broilers or ducks. The factory's collective fulfilled its output production plan for 1986 on 13 August and lowered its production costs. The net profit from this exceeded 1 million rubles.

The factory's administration concludes a contractual agreement with each family team. For each percent of plan over-fulfillment, the workers receive bonuses amounting to one percent of their annual earnings. Bonuses are also

issued for savings realized in direct expenditures. The factory is constantly increasing the rates for output production.

Subsequently the speaker mentioned the importance being attached to the extensive conversion over to contractual arrangements of brigades having only a few members. Experience has shown that such arrangements make it possible to raise labor productivity sharply. Gosagroprom is developing practical measures for employing such contracts in various regions of the republic. Within the agro-industrial complex, a program has been launched for providing training for milkmaids, cow keepers, shepherds, pig tenders and poultry breeders. They are studying the intensive technologies for the production of animal husbandry products. In addition, there is a 36 hour training program for brigade leaders, heads of farms, middle echelon specialists and the chief specialists of farms, RAPO's and oblagroproms.

The processing enterprises represent an important element in the process of delivering livestock products to the consumer. Last year the meat and dairy industry realized economies on the order of 27,000 tons of meat and 488,000 tons of dairy resources as a result of use of the new technology. At the same time, an analysis of the branch's work reveals that full use is still not being made of the reserves available for realizing economies. Owing to non-fulfillment of the task for the production of milk and lactic acid products having a fat content of 2.5 percent alone, a savings of 4,000 tons of milk with a basic fat content was not realized. Dairy raw materials are being utilized very poorly during processing at enterprises in East Kazakhstan, North Kazakhstan and Ural oblasts and meat raw materials -- at meat combines in Dzhambul, Turgay, Kustanay, Kokchetav and Tselinograd oblasts. This year, all enterprises of the meat and dairy industry have been assigned tasks for the additional production of 61 million rubles worth of marketable products, based upon more intensive processing of raw materials.

The speaker assured those in attendance that the republic's Gosagroprom will undertake all possible measures for further intensifying the branch and increasing the production of animal husbandry products.

In his speech delivered before the Plenum, the 1st secretary of the Central Committee of the Communist Party of Kazakhstan G.V. Kolbin stated that the CPSU Central Committee, in carrying out the requirements of the April (1985) Plenum of the CPSU, is imposing greater demands upon all party committees and the various subunits of economic and other organs with regard to shortening the schedules for solving social problems and especially the problem of food supply. It was for this reason that the Secretariat of the CPSU Central Committee examined and expressed some justified complaints with regard to the preparations made in our republic for carrying out the livestock wintering campaign. Appropriate instructions were handed down for the adoption of additional and effective measures aimed at raising the productivity of the livestock and increasing the return from animal husbandry operations.

The question concerning the observance of strictness and fairness in coordination with food support we are raising not so much for the sake of reproach, but rather in the interest of searching for methods for solving the problem. How can we solve the meat problem in our republic? Indeed, many

recall those periods when we freely traded in meat. What has happened? Here is what happened: over the past 10 years, the state plans for livestock and poultry purchases were fulfilled only once and for milk -- on five occasions. During the 10th Five-Year Plan, we began observing a trend towards a reduction in the production of many types of meat. Compared to the level for the 9th Five-Year Plan, the average annual production of pork declined by 21 percent in dressed weight, mutton -- by 8,500 tons.

During the 11th Five-Year Plan, despite growth in the number of animals, once again we were unable to achieve the 1971-1975 level for the production of these types of meat. And the indebtedness to the state during the past five-year plan was as follows: meat in live weight -- 385,000 tons and milk -- 150,000 tons. The market fund for meat and meat products per capita declined from 27.6 kilograms in 1976 to 26.9 kilograms in 1986. What caused this situation? The cause lay in the fact that the Central Committee of the Communist Party of Kazakhstan, the government of the republic, the oblast committees and the oblast executive committees did not display constant or specific concern for this branch, nor did they evaluate properly the status of affairs. They considered their chief tasks to merely be that of fulfilling the grain procurement plan at any cost and increasing the number of animals. In the process, they often ignored the shortcomings and negative phenomena which appeared. During the 10th Five-Year Plan, the republic reduced the state procurements of meat and it failed to carry out the tasks established during the 14th Congress of the Communist Party of Kazakhstan with regard to increasing the procurements of the principal types of livestock products. Nevertheless, it was noted in the accountability report to the 15th Congress that the party organizations and the soviet and agricultural organs had clearly carried out a great amount of work in the development of animal husbandry.

During the years of the 10th Five-Year Plan, when the republic turned over a maximum quantity of grain, the availability of feed for the public livestock did not exceed two thirds of the amount required for them and the average daily weight increases during fattening were two times lower than those required. With each passing year, the number of livestock in the republic has increased while the feed base has fallen farther and farther behind. Compared to the 10th Five-Year Plan, when the sovkhozes and kolkhozes expended 30 quintals of feed units per standard head, with 23 percent of this amount being concentrates, during the 11th Five-Year Plan -- only 28 quintals of feed units, with the proportion of concentrates dropping to 19 percent. In terms of feed availability, it turned out that public animal husbandry was operating under worse conditions than those which prevailed even during the 9th Five-Year Plan.

The productivity of public animal husbandry declined instead of increasing. An increase took place in the proportion of undernourished livestock delivered to meat combines. Thus, in 1985 and compared to the level for 1980, the average delivery weight for cattle throughout the republic as a whole decreased by 60 kilograms and in Semipalatinsk Oblast -- by 109, in Taldy-Kurgan -- by 89 and in Kustanay Oblast -- by 70 kilograms. The milk yield per cow amounted to 1,993 kilograms, or 102 kilograms less than the indicator achieved in 1980. An increase took place in the deliveries of beef considered to be below

average in quality. In the case of mutton, this figure reached 46 percent and in some oblasts -- 60. This affected not only the meat resources and meat availability but also the economic indicators. Over a five-year period, the sovkhozes and kolkhozes lost 640 million rubles as a result of deliveries of emaciated and undernourished cattle and sheep.

A serious shortcoming in animal husbandry at the present time is the high degree of neglect being displayed in reproduction of the herd. Compared to the 9th Five-Year Plan when 72 calves were obtained per 100 cows, during the 10th Five-Year Plan this indicator fell to 69 and in 1985 only 67 were obtained. Each year, on almost 400 farms, almost one half of the cows fail to produce calves. Almost two million ewes are not producing offspring. Moreover, the expenditures for maintaining barren cows during the five-year period exceeded 700 million rubles. Many kolkhozes and sovkhozes which lack their own calves have been converted into enterprises for purchasing calves from the population. Thus, during the 1981-1985 period, 2.8 million calves, or 34 percent of the number of offspring obtained on the farms, were purchased. How could there be an increase in the brood stock or in the production of meat if the kolkhozes and sovkhozes are obtaining an average daily weight increase of 330-350 grams per head of cattle instead of a minimum of 500-600 grams? All of the above serves to indicate how meat production should not be developed. Thus we are still faced with the question of how best can this problem be solved? Should we ignore the meat problem? No, this task lends itself to a solution and we are obligated to fine it, if only so that people will realize that it is within our capability.

Here we have in mind strengthening the feed base in a manner such that we will be able to ensure the required increase in meat in a reliable and guaranteed manner. In order to accomplish this, we must define program measures, as discussed during the recent plenum. These must be measures aimed not only at increasing the production of feed but also ensuring its efficient use and the elimination of waste and squandering.

The question regarding waste is not an idle one. The republic's organs of people's control have just completed an inspection of five oblasts: Aktyubinsk, Alma-Ata, Kzyl-Orda, Turgay and Ural. And here is what was uncovered: a considerable number of livestock belonging to the private sector are being maintained within the public kolkhoz and sovkhoz herd, including 72,000 cattle, 420,000 sheep and goats and 27,000 horses and camels.

And all of these animals are being fattened on state feed. In Ural Oblast, for example, on 21 farms where checks were carried out there were 300 head of cattle, 286 sheep, 10 horses and 200 hogs that were unaccounted for. Roughly 104,000 privately owned sheep, 26,000 head of cattle and approximately 7,000 horses were being maintained at state expense in the public herd. A deficiency was uncovered consisting of 950 head of cattle, 300 horses and 2,000 sheep. The livestock of 1,960 leading workers throughout the oblast, including 17 party, 22 soviet and trade union workers and workers attached to the procurator's organs, the court and militia are being maintained within the public herd. During November and December, this caused farms to sustain losses amounting to approximately 1 million rubles. Many farms are

maintaining 250-280 privately owned sheep and dozens of head of cattle and horses in their flocks and herds.

In the main portion of the farms, primary zootechnical accounting has been neglected and in the rural soviets -- accounting for the number of animals being maintained by citizens on a privately owned basis. The violations in this area are massive in nature -- what can be said in this regard? Certainly, if a party leader or procurator undertakes to fatten his own livestock within a sovkhoz or kolkhoz herd, he must make certain concessions to the farm leader who organized such operations and also to the shepherd, according to the principle of "You for me and I for you." This principle has been condemned by the party and is a basic violation of all of the norms for fairness, order and legality. And there can be no doubt but that order must be restored in this work in a firm and irrevocable manner. It is another matter if a shepherd or herdsman maintains a certain number of his own livestock in a public herd for grazing purposes. He must use the public feed based upon a contract with the farm and he must supply meat to the state on a legal basis, with a payment being made for the expenses borne by the farm. We cannot infringe upon the interests of those who, by their labor, fatten livestock for the benefit of society and in the interests of the people.

The oblast party committees, oblast executive committees and the republic's agroprom [agro-industrial committee] must investigate the situation thoroughly and evaluate the incompetent actions of those leading personnel who used borrowed labor in response to services rendered at the expense of the state and its interests. Genuine workers must aid and support them in finding legal methods for combining mutual interests -- state and private. At the same time, the republic subunits, all oblast party committees, oblast executive committees, municipal and rayon party committees, in approving strict operations and strengthening party and state discipline, must define measures for raising the productivity of livestock and, in particular, for increasing sharply the weight increases in cattle, hogs and other types of livestock, in the interest of ensuring fulfillment of the established tasks and over-fulfillment of the plans for meat products. Moreover, it should be borne in mind that the entire above-plan volume of meat will be employed for local supply and for improving the food supply for the republic's population.

Only in this manner will we be able to improve the food supply and accomplish it with an increase, not by a proportion of a percent but on a larger scale and at rates which will be tangible and noticeable. In this manner, more products will appear on the store counters based upon both state and consumer cooperation prices.

In this regard, it is appropriate to state that the fattening of livestock at kolkhozes and sovkhozes and on the private plots of kolkhoz members and sovkhoz workers on a mutually advantageous and contractual basis should be encouraged and developed in every possible way. Towards this end, the farms must issue adequate amounts of coarse and succulent feed and also concentrated feed to the degree it is possible, while bearing in mind that agricultural workers receive considerable amounts of concentrated feed in the form of payments in kind. The maximum development of livestock fattening operations on a contractual basis on private plots will make it possible to increase

considerably the rates of growth for meat production and to improve the meat supply for all cities and populated points in our republic. At the same time, firmness of character must be displayed in the distribution of meat products on a fair basis.

It bears mentioning that at the present time up to 30 percent of the meat intended for trade is being sold by closed distributors who were created in various offices, institutes, ministries and departments. All of this -- involves the use of official status and the desire to create unauthorized privileges for a definite category of people, thus leading to a "privileged" society. But there are authorized privileges and privileges which are "earned" by virtue of one's position. Authorized privileges must be approved and there should be no reluctance in discussing them. To the contrary, they should be publicized so that everyone knows exactly where abuses persist and where legal use is authorized by law.

The so-called "earned" privileges and not the authorized ones must be eliminated decisively, they must be publicized and the guilty parties must be held strictly accountable. Work is presently being carried out aimed at eliminating so-called "closed" distributors and turning over the meat products to an open trade network. There can be no doubt but that the measures undertaken to achieve a fair distribution of meat products and an increase in their production over and above the planned tasks will produce noticeable changes for the better this year. Such is the task remaining to be solved by the primary leaders of the party and soviet organs in the republic and in the oblasts, cities and rayons.

The final result -- an excellent evaluation of the business-like and political qualities of a leader of any rank. The Central Committee of the Communist Party of Kazakhstan has defined the criteria for the business-like and political qualities of each leader and each communist. This is being promoted by updating of the references, by reports issued by communists in the primary party organization and by certification by responsible workers attached to an administrative staff.

The work is unfolding and gathering strength. It will make it easier to uncover who is being protected by an administration and cannot be confirmed in terms of the required qualities. Certainly, such individuals should be released. Only those individuals who have been advanced based upon their true worth, who can be entrusted with a particular sector of work and who have displayed the appropriate political and moral qualities, humility, loyalty to their task and a respectful attitude towards human concerns, needs and problems -- only this type of worker should be placed in a managerial position today. There are many such people.

Many talented people representing various nationalities live in the Kazakh SSR. On more than one occasion, they have demonstrated remarkable talents and have achieved fine results. Thus there can be no doubt but that at the present time, under conditions involving radical changes in all branches of social life and national improvements and enthusiasm engendered by the decisions handed down during the April (1985) Plenum of the 27th CPSU Congress, proper restructuring and proper results in both economic and social development will be ensured.

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CSO: 1824/268

CORN SEED, CROP DEVELOPMENT IN RSFSR, MOLDAVIA

Stavropol Corn Growers

Moscow PRAVDA in Russian 14 Apr 87 p 1

[Article by PRAVDA correspondent V. Pankratov under "Spring, Your Cares" rubric: "Along With the Ear--A Cob: Stavropol Region: A Union of Scientists and Farmers"]

[Text] The spring steppe of the Stavropol Region is variegated and multicolored. There are blocks where the sprouts are even and harmonious. But the adjacent emerald carpet appears to have scorched places; the view is being ruined by thin and empty sections. This is the result of a dry fall. Of the total block of winter crops, almost one-fourth had to be resown. At the same time, work is under way in the spring fields. Plants that had begun to grow were fed with mineral fertilizers. Today the main concern of grain growers is to give the sown areas the very best conditions for development and not to allow an incomplete harvest of grain in the fall. It is also important to condense the time of field work. For spring arrived very late.

This is why tractors are droning day and night. All mechanized complexes are operating in two shifts. The farmers of the kray are full of determination to fulfill with honor their socialist obligations, according to which it is planned to increase the gross harvest of grain to 5 million tons. Most of the grain is wheat, barley and rye.

Also included is corn. Particular attention is now being paid to its cultivation.

At Izobilnenskiy Sovkhoz, winter grains occupy almost 3,000 hectares. Another 1,000 hectares are allocated to corn for seed.

"Our harvests are guaranteed," says N. Dolina, head of the plant-growing shop of this farm.

Last year they obtained 43.6 quintals of grain per hectare. They collected 17 quintals more of corn. The wages depend upon the yield. All subdivisions are under the collective contract.

How can the best experience by made generally available? The answer is in the recent order signed by M. Varshavskiy, chairman of the krayagroprom. In Stavropol Region, they have established what they called a scientific-production system for the growing of corn. It is called upon to help assimilate in the fields all of the best that science and practice have produced. This system is a unique kind of cooperation. Participation in it is singularly voluntary. The Stavropol Selection and Experimental Station of the All-Union Corn Research Institute became the head enterprise of the system. We are conversing with V. Nechayev, deputy director for scientific work:

"We established contact with farms in eight rayons. We singled out the base farms. Among them is Izobilnenskiy Sovkhoz."

N. Dolina confirms:

"The contacts have been worked out. I now have two assistants, representatives of the head enterprise. They are the senior agronomists for the introduction of advanced achievements in corn growing V. Gurdzhiyev and A. Gorlov. We pay their wages and they give the necessary advice. This is supposed to result in additional grain. We transfer part of the received profit to the selection and experimental station. In short, we are proceeding from the cost accounting principle. Both sides are interested in its strict observance."

The farms cultivate commodity as well as seed plantings of corn. At Izobilnenskiy Sovkhoz, they prefer to grow commodity grain. Baklanovskiy Kolkhoz also favors this practice.

But Put Lenina Kolkhoz is allocating most of its plantings to seed. It is tempted by the high payment for seed, which is of considerable importance under the conditions of self-support and self-financing to which all agricultural enterprises of the Stavropol region have been converted. Does this mean that the seed growers at Izobilnenskiy Sovkhoz have nothing to learn? They also can adopt some things from the base farm.

There are 105,000 hectares planted in grain corn in the kray and actually more than that because of the resowing of winter wheat. The gross harvest of corn grain will exceed half a million tons. A specialized scientific-production system is called upon to play an important role in the resolution of this task. Much depends upon how successful it is in utilizing not only the best experience and achievements of scientists but also the human factor. N. Gridin, chairman of Kolkhoz imeni Gorkiy in Trunovskiy Rayon, spoke to me about this.

"Our farm also went into the system as a base farm. The average yield of corn grain during the last 5 years was 32.6 quintals. This year we intend to double it. We have two links of corn growers. Competition has developed between them. A more precise determination of targets and incentives contributes to the success of this competition."

There are now a total of 48 farms in the scientific-productions system for the growing of corn grain and seed. The organizational period is not yet over but progress is obvious. Corn growers, who have always lagged behind in carrying out agrotechnical operations, are in the lead almost everywhere.

"Such scientific-production systems have been established for the cultivation of the seeds of sunflowers, sugar beets and perennial grasses," said N. Yeremin, secretary of the CPSU kraykom. "The common principle of organization is cooperation on a voluntary basis. The tasks are different, of course. Overall, however, they amount to pulling those lagging behind up to the level of those who are more advanced."

Corn Harvest Increase Planned

Moscow SOVETSKAYA ROSSIYA in Russian 9 May 87 p 1

[Article under "Spring Field" rubric: "Gold of the Cobs"]

[Text] Stavropol--The plowed areas around Stavropol have waited a long time for the corn seed. It is time to complete the sowing campaign but the planters are still tied down. This is the result of the unprecedented prolonged cold. But it was not able to "cool off" the intentions of the kray kolkhozes and sovkhozes to increase the harvest of grain corn in the year of the 70th anniversary of the Great October to half a million tons.

"The areas for the cultivation of cobs have been increased by one-third compared with the previous five-year plan. At the same time, everywhere there are possibilities for obtaining strong harmonious sprouts," says A. Krinitsin, chief agronomist of the krayagroprom, in familiarizing us with the situation.

The complex scientific-production system for the persistent increase in the production of corn grain worked out in the Stavropol Region makes the specified plans more realistic.

"It represents a complex of specific measures to disseminate especially productive hybrids and the corresponding agricultural technology," interjects N. Nesenov, director of the zone station of the All-Union Corn Research Institute. "For kolkhozes and sovkhozes specializing in the cultivation of this crop, the most efficient means of agricultural technology have been checked out as applied to local conditions. Calibrating plants, which have taken full responsibility for the quality of the seed loaded into the planters, have also become partners of corn growers."

Having coordinated the efforts of scientists and skilled workers, the people of Stavropol Kray have planned to increase the harvest of cobs to almost 1 million tons within the next few years.

Cob Processing Work

Moscow SELSKAYA ZHIZN in Russian 19 Nov 86 p 2

[Unattributed article: "To Different Addresses"]

[Text] Stavropol, 18 Nov--The skilled workmen of the corn calibrating plant at the Svetlograd elevator are now working around the clock. They have already dried and hulled more than 4,000 tons of cobs. They are finishing the calibrating and treatment of 1,800 tons of hybrid seed to be sent to various regions of the country. The Georgiyevsk Biochemical Plant has unloaded more than 400 tons of cob cores.

Seed Preparation Stressed

Moscow SELSKAYA ZHIZN in Russian 31 Dec 86 p 2

[Article by SELSKAYA ZHIZN corespondent P. Grigorenko: "There Are Those to Emulate: Which Seeds Do We Prepare for Sowing?"]

[Excerpt] Ulyanovsk Oblast--At many Ulyanovsk farms, they are placing seed-growing plantings on the best predecessors. The complex of responsibilities in connection with such plantings is not identical but the final result is always gratifying: good seed produces a higher yield. There are many such fields--in Cherdaklinskiy Rayon, for example. Sovkhoz imeni XXII partsyezda, Druzhba Kolkhoz, the training farm of the agricultural institute, and Krasnoyarskiy Sovkhoz have a reputation for such fields. Here there is active strain changing and renewal and a significant share of the sowings of winter crops is elite stock and first reproduction.

Kolkhoz imeni Ilyich and Zavolzhskiy Sovkhoz are taking good care of the new crop. The seed here is of the first class of the sowing standard only and is faultless in its germination, cleanliness and evenness of the kernels. In a day or two here they will begin to check the laboratory sowings and soil core samples.

Unfortunately, what has been said relates only to individual farms in Cherdakly. Even now, more than half of them are in no hurry to prepare the seed stock for the spring sowing. Almost 34,000 quintals of seed grain of cereal crops and corn have been placed in the second class of the sowing standard. There are many farms that have to increase the expenditure of seed to obtain the desired density of the young growth. A similar overexpenditure is necessary for Pamyat Ilyicha Sovkhoz, Kolkhoz imeni Michurin and Rossiya Kolkhoz, which have only 35 to 65 percent first-class seed and that is of the fourth to seventh reproduction. Cherdaklinskiy Sovkhoz has no good millet seed for sowing. And they are no hurry to exchange it. Their attitude toward perennial grasses is also cause for concern.

They are not hiding miscalculations in the rayon, thinking that it would be good to have a little less work in the future. At the oblagroprom, on the other hand, the rayon has been included in the column of those that are prospering, clearly because things are going worse at other farms. In

Karsunskiy and Veshkaymskiy rayons, for example, they are short 1,000 quintals of millet and a large batch of seed of spring crops was recognized to be substandard because of a high moisture content. In Novospa-skiy Rayon, good seed is only 67 percent of the total need, an indicator below the oblast average. In a large group of farms, the seed germination is no more than 87 percent and there are also impurities. A check revealed recently at the rayon seed farm of Novomalyklinskiy Rayon seed beginning with the fifth and ending with the eighth reproduction. And several neighboring kolkhozes are being supplied with such seed. For the rayon as a whole, the stock of suitable seed is less than half of what is needed.

Inspections performed in the fall revealed many areas on which the winter crops did not bush out or did not even come up. Resowing is necessary, especially in southern rayons--Starokulatkinskiy, Radishchevskiy and Pavlovskiy rayons. Hence, there must be no delay in exchange operations.

The sovkhozes of Terengulskiy Rayon were recently the first to begin growing corn for seed under intensive technology. They are establishing promising plans for an expansion of its plantings, specialized links are being formed, and a group of machine operators and specialists is planning a trip to Moldavia for training. But where can one obtain hybrid seed? The agroprom considered the Moldavian seed to be unsuitable and they have none of their own. So it is necessary to continue the search for seed in North Caucasus, in the southern Ukraine and in other places as well. Corn must occupy a worthy place in the Volga area.

In the coming year in the oblast, there will be a noticeable increase in the number of fields on which grain and industrial crops will be grown under intensive techology. In preparing for its application, it is necessary to pay special attention to the preparation of the seed. The concern about the "gold mine" of the harvest must be paramount in the entire complex of winter measures.

Preparation of Sowing Material

Moscow SELSKAYA ZHIZN in Russian 11 Jan 87 p 1

[Unattributed article: "To Different Addresses"]

[Text] Ordzhonikidze, 10 Jan--The collectives of the calibrating plants of North Ossetia fulfilled the plan for the shipment of first-class corn seed ahead of schedule. More than 18,000 tons of it were shipped to 40 oblasts of the RSFSR. The success was largely determined by the fact that the farms of the autonomous republic brought in a good corn harvest last fall. Each hectare yielded more tnan 50 quintals of choice grain.

They have put the preparation of highly conditioned sowing material on a flow line. Eight calibrating plants have established mechanized lines, drying chambers and ventilation facilities. The work is proceeding around the clock.

Corn Seed Shipped

Moscow SELSKAYA ZHIZN in Russian 17 Jan 87 p 1

[TASS item: "For the Corn Fields"]

[Text] Ordzhonikidze, 16 Jan--The calibrating plants of North Ossetia completed the early shipment of corn seed to the all-union stock today. They shipped more than 38,000 tons of it to 40 krays, oblasts and republics. the processing of sowing material is continuing.

Prior to the beginning of spring field work, at the request of the agro-industrial committees, large supplementary batches of graded and hybrid seed will be shipped. The flow-line method of processing seed introduced here will help the collectives of specialized enterprises of the autonomous republic to work evenly and to fulfill the requests of farms accurately and on time. Particular attention was paid to increasing the grade of grain.

New Seed Processing Method

Moscow SELSKAYA ZHIZN in Russian 10 Feb 87 p 1

[Unattributed article: "Orders Filled"]

[Text] Ordzhonikidze--The corn growers of North Ossetia are using first-class seed only to sow the fields this spring. Calibrating plants finished filling the orders of farms.

A total of almost 10,000 tons of seed of high-yield strains well adapted to the different climatic zones of North Caucasus have been prepared. Now, for the first time, the calibrating plants have introduced a method for the processing of seed using a special film-forming apparatus. Such seed can be sown 2 weeks earlier than the optimum time and produces even and harmonious sprouts under the conditions of low temperatures.

Seed Shipped

Moscow SELSKAYA ZHIZN in Russian 25 Mar 87 p 1

[Article: "Seed Shipment Finished"]

[Text] Ordzhonikidze, 24 Mar, TASS--Graded and hybrid corn seed is ensuring high and stable yields of green mass in different climatic zones of the country for the laying in of nourishing silage. The calibrating plants of North Ossetia completed its shipment to northern and eastern regions today.

Moldavian Hybrid Seed

Moscow SELSKAYA ZHIZN in Russian 1 Apr 87 p 1

[Article by V. Okunev: "They Shared Their Experience With Others"; first paragraph is SELSKAYA ZHIZN introduction]

[Text] Moldavian SSR--The scientists and farmers of Moldavia are helping to introduce industrial technology for the cultivation of sunflowers and corn in a number of oblasts of the RSFSR.

In one of the offices of the Moldavian Research Institute for Field Crops of the Selektsiya Scientific Production Association, a group of specialists leaned over technological maps.

"The maps are intended for the farms of Voronezh and Ulyanovsk oblasts," explained I. Untila, general director of the scientific production association. "We are performing an experiment...."

Its essence is the following. This year in Voronezh and Ulyanovsk oblasts, Moldavian specialists and machine operators will cultivate large-scale plantings of sunflowers and corn. Fields in the Volga region and on the Upper Don have been sown with seed bred in Moldavia before but good yields were not obtained in every case. It has now been decided to show the inhabitants of Voronezh and the Volga region their methods for growing sunflowers and corn for seed.

Their Moldavian friends have something to share. The kolkhozes and sovkhozes of Selektsiya Scientific Production Association, in particular, have gained experience in obtaining high sunflower yields based on industrial technologies. It excludes the use of manual labor but does require the precise observance of the timing of the performance of all operations and the skillful use of chemical means and machine complexes. For this reason, the delegations from Moldavian farms that visited Ulyanovsk and Voronezh oblasts the other day included agronomists, engineers, plant-protection specialists and the best machine operators of Brichanskiy, Yedinetskiy, Chadyr-Lungskiy, Drokiyevskiy and Glodyanskiy rayons. Later on, they will cultivate about 1,000 hectares each of corn and sunflowers.

In Kantemiroskiy Rayon of Voronezh Oblast, such plantings will be placed at Pravda and Druzhba kolkhozes. Specialists and machine operators from Glodyanskiy Rayon in Moldavia will supervise them. The managers and guests have already chosen the fields, developed technological maps and specified fertilizer doses. All of the work will be done under the conditions of the brigade contract. The experience of Glodyanskiy Rayon is especially instructive in the growing of sunflowers. Here they have learned to obtain not only high but also stable yields of a valuable industrial crop. In the last 5 years, for example, the average annual harvest of oil seeds amounted to 27.5 quintals from each of 3,000 hectares. In addition, industrial technology permitted a sharp reduction in labor input.

In the RSFSR, they are also interested in the experience of the Moldavian corn growers. Such masters of their business as S. Parmakli, Z. Paskalov and G. Khosta from Chadyr-Lungskiy Rayon learned to obtain up to 70 quintals of grain per hectare on unirrigated lands.

The industrial technology for the cultivation of corn was developed with the help of the scientists of the Moldavian Research Institute for Corn and Sorghum of the Gibrid Scientific Production Association. They are well familiar with the seed from this association in Belorussia, in the Transbaikal region, and in Odessa and Vologda oblasts. This spring, the seed of the hybrids "Moldavskiy 330," "Moldavskiy 215" and "Moldavskiy 257" will go into the soil of many fields.

"The people of Voronezh and Ulyanovsk are interested in our industrial technologies for the cultivation of corn," says Ye. Khaskalovich, the association's chief agronomist and seed grower. "We very much want to know how our hybrids will behave in these oblasts. For we send a large part of the produced corn seed beyond the borders of the republic. And this flow will increase."

Joint Experiment Planned

Moscow SELSKAYA ZHIZN in Russian 4 April 87 p 1

[Article by M. Belousov: "Agreement on Collaboration"]

[Text] Ulyanovsk, 3 Apr--A cooperative agreement was signed between the Ulyanovsk Oblast Agroprom and the Moldavian SSR Gosagroprom on the carrying out of a joint experiment on the introduction of an industrial technology for the cultivation of sunflowers and corn for seed. A delegation of Moldavian specialists and machine operators visited the sovkhozes Terengulskiy, imeni Danilov, Tashlinskiy and Skugareyevskiy in Terengulskiy Rayon, where it is planned to perform this experiment in 1987.

The envoys from the fraternal republic specified the system for the performance of technological operations in the spring fields and in the care of crops and familiarized themselves with the preparations of the specialized links for the upcoming spring field work.

Corn Planting Finished

Moscow SELSKAYA ZHIZN in Russian 20 May 87 p 1

[TASS item: "In the Best Time"]

[Text] Ordzhonikidze, 19 May--The farmers of North Ossetia have completed the sowing of corn. The late spring upset the calculations of grain growers. But the mechanized subdivisions finished the sowing in the best agrotechnical times and with high quality. Having put all corn fields under the collective contact, and that is 45,000 hectares, the farmers placed the main emphasis on industrial technology. The acceleration was achieved through the coordinated work of agroprom partners and the maximum utilization of the possibilities of the collective contract.

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CSO: 1824/272

USSR MINISTERS DISCUSS '87 CORN CROP

Moscow EKONOMICHESKAYA GAZETA in Russian No 14, Apr 87 p 2

[Article by TASS correspondents N. Zuyev, A. Ignatyev and A. Urbantsev under "APK Economy: Spring Worries of Farmers" rubric: "Before Going Out in the Fields: USSR Ministers Respond to Readers' Questions"; first paragraph is EKONOMICHESKAYA GAZETA introduction; parts of article in interview format]

[Text] Before the start of the sowing campaign, the editor's office of EKONOMICHESKAYA GAZETA and TASS receive many letters from farmers and workers of local agroproms touching upon a number of urgent problems. It is above all a matter of supplying the farms with seed, fertilizer and other means of production. The editor's office asked heads of ministries to respond to questions raised by readers.

Seed

The wisdom of grain growers says: "you reap what you sow." This truth, known to all, has not lost any of its value today. Nevertheless, it would not hurt to remind ourselves of it, thinks V. Morar, head of one of the directorates of the Moldavian Gosagroprom [State Agroindustrial Committee]. He writes: "The calibrating plants of our republic agroprom are bringing corn seed up to the very highest condition. Seed material of poor quality is reaching the farms from analogous enterprises of the USSR Ministry of Grain Products. Why is this happening?"

USSR Minister of Grain Products G.S. zolotuchin responds:

[Answer] Let us take a look at the figures. The enterprises of the Moldavian Ministry of Grain Products have prepared about 23,000 tons of calibrated corn seed for the spring sowing and 93 percent of it is first class. Of 18,000 tons of seed at the plants of the republic Gosagroprom, 91 percent was brought up to first class. It is, of course, clear to every agronomist and experienced grain grower that the level of the yield is determined above all by the availability of first-class seed. We will continue to work on raising the quality of the seed material.

[Question] Grigoriy Sergeyevich, since the plants were mentioned, could you please respond in passing to V. Syrotyuk, chief engineer of the Novomoskovskiy Grain Products Combine in Dnepropetrovsk Oblast. In his letter, he asks when the calibrating plants in the oblast will be reconstructed.

[Answer] A decision was made at the beginning of February of this year on the further development and acceleration of the technical reequipment of plants for processing corn seed. It is planned to reconstruct Novomoskovskiy Combine in 1989 and the technical reconstruction of the remaining seven plants is planned for 1989-1991.

[Question] Your ministry to planning to accept corn seed from the farms of the republic only within the planned volumes. If part of the harvest is lost, we may not have a reserve. What happens then? asks A. Pekhota, head of the directorate for selection and seed growing of the Kirghiz Gosagroprom.

[Answer] Beginning this year, there has been a change in the system for confirming the plans for the procurement of hybrid and high-grade grain, oil-seed crops and grasses. These plans are now confirmed by USSR Gosagroprom in agreement with the councils of ministers of the union republics. In so doing, consideration is also given to the laying away of seed, including corn, in the state reserve stock. Thus, in Kirghizia, the reserve fund has been established at 5,000 tons of seed of spring grain crops including corn. And no problems should arise in the establishment of intermittent stocks. In this connection, I wish to add that on our part there will be no obstacles to kolkhozes and sovkhozes for the above-plan procurement of first-generation hybrid corn seed.

[Question] I believe that the work of the seed growers of calibrating plants is being curbed by the old regulation on lowering the strain markups for the moisture content of the seed of hybrids. And the farms have to pay quite a lot to the enterprise for exceeding the established moisture content. When will the outdated regulation be revoked? asks V. Makitruk from Odessa Oblagroprom.

[Answer] The mentioned regulation is indeed outdated. At the present time, the Kubanskiy branch of the Zernoprodukt All-Union Scientific Production Association is working on a draft of a new regulation on treating corn seed. It will be presented for confirmation in the fourth quarter of this year.

[Question] A ton of grain from high-lysin corn yields an additional 1.5 kg of lysin. Are there proposals to stimulate the production and procurement of high-lysin grain and by what means? asks M. Borovskiy, deputy general director of the Moldavian Scientific Production Association for Corn and Sorghum "Gibrid."

[Answer] I can answer conclusively that in our country the production and sale of high-lysin corn to the state are stimulated. The highest purchase price has been established for it--175 rubles per ton of grain as opposed to 120 rubles per ton of so-called half-flint and dent corn.

Many questions reached the editor's office in regard to the provision of the farms with mineral fertilizers and plant-protection means.

Fertilizers

[Question] The farms are feeling a shortage of several types of fertilizers. If we make up for the shortage of the means of chemization on the plantings of some crops at the expense of others, then we will come up with a low yield on such fields. What should be done? asks N. Smychenko, brigade leader at Kolkhoz imeni Vatutin in Kirovogradskiy Rayon of Kirovograd Oblast.

N.M. Olshanskiy, USSR minister for the production of mineral fertilizers, responds:

[Answer] The situation is indeed not simple. To help farmers, we and the USSR Gosagroprom reviewed the schedule for deliveries of mineral fertilizers so as to deliver the largest possible quantities in time for spring field work.

For the first 2 months, the enterprises of the branch overfulfilled the plan for the production of all types of mineral fertilizers. During this period, 150,000 tons of them were delivered to agriculture above the plan. Deliveries of chemical plant-protection means to the countryside were fulfilled. The deliveries of output for farms cultivating crops under intensive technologies were put under special control in the ministry.

I would like to note that in a short time the country established a large industry for the production of mineral fertilizers. This made it possible to increase their output from 7.4 million tons in 1965 to 34.7 million tons last year. Nevertheless, we understand that there are not enough mineral fertilizers. In the 12th Five-Year Plan, we will increase their production by another 8.5 million tons.

The question of E. Madiyev, director of Ala-Archa Sovkhoz in Alamendiskiy Rayon in the Kirghiz SSR:

[Question] Intensive technologies for the cultivation of agricultural crops must be ensured through the corresponding set of means to protect plants against pests and diseases. We are not receiving the full amount of herbicides. And this situation exists not only at our farm but also for the republic as a whole. When will the situation be corrected?

[Answer] In our country, the industry for the production of chemical plant-protection means has not been developed to the same extent as has the industry for mineral fertilizers. Agriculture, especially under the conditions of intensive technologies, needs about 150 different compounds for combating pests and plant diseases. We produced only 89 compounds last year. We had to buy the rest abroad.

To resolve this problem, the ministry has worked out a complex program for the development of the production of chemical plant-protection means. As early as 1990, their deliveries to agriculture will increase by 115,000 tons in

comparison with last year. For the most part, we plan to meet the needs of agriculture for pesticides by 1995. By this time, the volume of their deliveries will increase to 480,000 tons and the assortment will expand to 159 compound names. This will be achieved both through an expansion of domestic production as well as through the establishment of joint enterprises, primarily with the CEMA member countries. In so doing, we will develop the production of the most promising compounds with small application doses and with low toxicity that break down quickly in the environment.

A. Mukhbuldayev, a corn grower at Teskensuyskiy Sovkhoz in Alma-Ata Oblast:

[Question] Fertilizer deliveries should be delimited by seasons. In the summer, the basic need is for nitrogen fertilizers, whereas phosphorus fertilizers are required in the fall. We receive complete fertilizers in the summer and winter. When will this matter be set right?

[Answer] That is a legitimate question. The production of complex highly concentrated fertilizers has undergone the greatest development in recent years. This made it possible to increase the concentration of nutrients from 29.4 percent in 1970 to 41 percent in 1985. Through this alone, we achieved huge savings in the delivery, storage and application of mineral fertilizers. In short, we solved the problem of complex fertilizers. At the same time, with the transition to intensive technologies, there was a significant increase in the need for one-sided fertilizers. We are now reorganizing our industry. Thus, as early as the current five-year plan, the production of one-sided phosphorus fertilizers in shortest supply for agriculture will almost double.

I would like to touch upon still another problem. We as well as the workers in the agro-industrial complex and transport workers can do a lot to raise the efficiency of the chemical means delivered to the rural areas. At the present time, much fertilizer is lost during transport, storage and application. It is no secret that chemical plant-protection means are being distributed to the farms with no consideration of the actual need and that the rules for their storage and the technology for their application are being violated. The establishment of order in this matter does not require large capital investments and results can be obtained today.

Equipment

[Question] The successful performance of the spring sowing largely determines the level of the provision of the farms with equipment. In this connection, rural workers are putting serious demands on the builders of agricultural machinery. Thus many good words were said about the eight-row corn planter, which puts mineral fertilizer in the soil at the same time as the seed. But they have not yet shown up at Keyl-Dzhigdinskiy Sovkhoz in Alma-Ata Oblast, complains A. Tokhniyazov, the farm's link leader.

A.A. Yezhevskiy, USSR minister for tractor and agricultural machine building responds:

[Answer] I want to point out in particular that the branch is working out the plans for the five-year period in strict accordance with the requests of the USSR Gosagroprom. We are fulfilling these requests for the basic indicators. As for the eight-row corn planter in particular, the Krasnaya Zvezda Association in Kirovograd, which specializes in the production of new equipment, overfulfilled the plan for 1986. This year the enterprise collective was given a more intense task. It is planned to produce 22,000 planters, which is 12.5 percent above last year's level. So that we hope to satisfy the requests of the country's farms.

[Question] We frequently encounter a situation in which some machines are imposed on us, whereas we do not receive some makes of machines that are very necessary for the processing of seed corn, for example, writes P. Martynets, department head of the Dnepropetrovsk Grain Products Directorate.

[Answer] Indeed, a number of models of equipment that we deliver to USSR Gosagroprom are obsolete. The branch enterprises are therefore reconstructing production at an accelerated pace and establishing highly efficient equipment of the processing-center type, which will permit us to reorganize ourselves quickly for the delivery of progressive models of equipment.

The successful resolution of this task is largely determined by the introduction of state acceptance at branch enterprises. I wish to note in particular that its first results were discouraging for us. Thus, at the Tselinogradselmash Association, according to estimates by the State Committee for Standards, only 10 percent of the output met technical conditions. I have to admit that we had a better opinion of the quality of our machines for intensive and soil-conserving technologies. Under these conditions, we worked out a new policy in relation to subcontractors. We are now moving away from mutual grievances and toward mutual understanding and cooperation. Thus, good results were obtained as a result of the realization together with the enterprises of USSR Gosagroprom of a program for the production of sorting points for corn seed. This year it is planned to manufacture 50 units of them.

The branch also was able to take a serious step forward in reducing the time for the development of new models of equipment. The path from the idea to its introduction was reduced by more than half. Previously each designer sought to create something original, in other words, to invent his own bicycle, which led to great difficulties in the servicing of the machines and machine units. Now the situation has changed. One can, for example, bring in an assembly for the preparation of grain. Our designers borrowed the idea of the installation of a main assembly from the aviators.

We selected from our mail the most topical problems and presented them to the managers of the branches. The successful performance of this year's sowing campaign depends upon their prompt resolution. Not only the workers of USSR Gosagroprom but also the many thousands of collectives of industrial enterprises are responsible for it.

Availability of Seed of Spring Grains and Legume Crops and Potatoes at Kolkhozes, Sovkhozes and Interfarm Enterprises As of 1 March 1987

	Spring grains and legumes (excluding corn)		Potatoes	
	Thous. tons	Percent of need	Thous. tons	Percent of need
USSR	18,527	102	11,921	100.4
RSFSR	12,317	102	6,232	97
Ukrainian SSR	1,647	103	2,340	101
Belorussian SSR	434	100.4	1,961	114
Uzbek SSR	140	113	80	113
Kazakh SSR	3,331	103	303	90
Georgian SSR	18	140	89	106
Azerbaijan SSR	3	90	42	90
Lithuanian SSR	198	100.8	257	100.6
Moldavian SSR	32	123	15	56
Latvian SSR	146	102	234	98
Kirghiz SSR	66	111	42	100.7
Tajik SSR	39	89	30	105
Armenian SSR	24	86	38	100.3
Turkmen SSR	33	139	11	195
Estonian SSR	99	104	247	107

The provision of the farms with seed was: 108 percent for wheat, 88 percent for buckwheat, 95 percent for rice, and 86 percent for legumes.

(Table compiled by USSR Central Statistical Administration)

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CSO: 1824/271

FIRST QUARTER 1987 TIMBER PROCUREMENT TOTALS REVIEWED

Moscow LESNAYA PROMYSHLENNOST in Russian 16 Apr 87 p 1

[Unattributed article: "The Times Require Acceleration -- On Results of Forest Sectors' Work in Quarter I"]

[Text] We talk and write a lot about restructuring and present out attitude about it. However, it is time to prove this attitude in specific deeds and use this to measure our approach to evaluating the contribution of various production collectives to accelerating the country's economic development.

In the first quarter enterprises and associations in USSR Minlesbumprom were again among the lagging. The target for output sales was only 99.5 percent fulfilled, and for commercial output -- 99.7 percent. Consumers were shorted 253.8 million rubles worth of goods. It is important to understand how this lagging evolved, whose fault it was and how, in the remaining three quarters, not to repeat errors, but make up shortcomings and successfully complete the year.

The country's loggers, engaged in competition to honorably celebrate the 70th Anniversary of the Great October Revolution, successfully met their high socialist obligations. In the first quarter they logged and hauled 5.6 million cubic meters more than the plan. The biggest contributions to attaining the goals were attained by workers in Arkhangelsk, Vologda, Kirov, Kostroma, Tomsk, Tyumen, Novogorod, Kemerovo, Leningrad and Omsk oblasts, Krasnoyarsk Kray, the Komi and Udmurt ASSRs, and the Bratsk Forest Industry Complex Production Association.

An analysis of loggers' work shows, however, that there were breakdowns in their production conveyor. While the quarterly target for hauling timber was 105.1, and the debarking target 104 percent fulfilled, it was only 99 percent fulfilled for commercial timber. This last indicator is of great interest to sawmill workers, panel board, veneer and paper makers and other users of wood, for upon it depends the stability of high quality raw material supplies to enterprises. During the second quarter the most serious attention must be directed to this.

Collectives at pulp and paper enterprises in the sector did not meet the most important indicators. Commercial pulp production was 27,100 tons short, 23,400 tons of this shortfall was due to the closed down Priozersk Cellulose Plant. This is only a small share of what now must be paid for lack of attention to

environmental protection and the lack of desire to show prompt concern to the effective work of purification facilities.

Also, consumers were shorted 13,800 tons of paper and 16,900 tons of cardboard. The poor organizational work by specialists in production administrations in the pulp and paper industry and all union associations had its effects. In particular, this is shown in some enterprises' unsatisfactory preparations for winter work. This led to emergency shutdowns of thermal power engineering equipment, lift and transport equipment in log lots and preparation facilities.

The raw materials shortages occuring for reasons referred to above have made themselves known. Over a 3 month period pulp and paper enterprises were shorted 1.5 million cubic meters of wood. Raw material starvation is experienced at the Amur TsKK [Pulp and Cardboard Combine], the Syasskiy, Svetogorskiy, Baykal, Balakhnin and Mariyskiy Combines and the Astrakhanbumprom [Astrakhan Paper Industry], Kaliningradbumprom and Sokolbumprom Associations. Sector staff workers were not able to solve this question on time, neither could they balance production plans with resources allocated. This is the reason for the 4.7 million square meter shortfall in cardboard boxes.

The picture in reports on the wood processing sector is all too familiar: targets were not met for practically all products except furniture. Only the plan for producing household furnishings was met (100.5 percent, in wholesale prices). Sawmill workers are behind by 224,500 cubic meters of lumber, veneer makers by 11,400 cubic meters, panel board makers by 59,300 cubic meters of DSP [particle board] and 2.1 million swuare meters of DVP [fiber board], while house builders failed to produce 34,700 square meters of manufactured housing.

The reasons for this situation have bee repeatedly mentioned at conferences, meetings on day to day problems and at board meetings. These include: the lagging technical base at enterprises, obsolete manufacturing processes with large percentages of unproductive manual labor, the lagging of science in the sector from the main directions in industrial modernization, shortages of highly qualified cadre, failure to meet present social sector requirements. Because, month after month and year after year these same anchors drag wood processing behind, it must be acknowledged that ministry administrations are not able to find ways of solving old problems, are not handling their organizational role, are not determining, but only stating the course of events.

In discussions with managers and specialists in USSR Minlesbumprom processing subsectors during these months there were often references to the difficult winter. Weather conditions were, in fact, not favorable, frosts and snowdrifts created additional difficulties. However, the weather was the same for everybody, while the results were quite different.

For example, enterprises and organizations in USSR Gosleskhoz [State Forestry Committee] fulfilled their quarterly plan for output sales by 100.5 percent and labor productivity increased 5.2 percent over the same period last year, although winter really tested the forester labor collectives and things did

not move smoothly all the time. In January enterprises in RSFSR Minleskhoz [Ministry of the Forest Industry] failed to haul 21,200 cubic meters of timber. This failure at the start forced them to mobilize, strengthen labor discipline and keep thorough control over target fulfillment. Thanks to this they succeeded in getting on schedule.

Forest workers in Kalinin Oblast demonstrated an ability to work steadily in difficult conditions. In the first quarter they overfulfilled the haulage plan by 50,000 cubic meters. Good use was made of the winter period for logging in Vladimir, Kostroma and Ryazan oblasts. Good results were obtained through the use of multipurpose equipment at logging operations. In Vladimir Oblast, for example, skidder-bundler machines are working in three shifts. Also, normal conditions for time off and hot meals have been organized for operators.

In recent months conditions have been strained at cleaning cuttings. Having completely met their targets, the country's foresters logged 1.2 percent more disposable [likvidnyy] timber than planned.

However, together with these successes, workers in USSR Gosleskhoz enterprises and organizations allowed several disruptions. They did not meet contractual obligations for output deliveries, the shortage reached 7.3 million rubles. In RSFSR Minleskhoz this indicator remained at last year's level, 98.7 percent. Units in Tomsk and Kemerovo oblasts are chronic debtors.

The pace of spring tree planting is quickening, but sector workers are still not completely ready for it. In Vologda, Tomsk and Kemerovo oblasts forestry administrations have not supplied tree planting operations with all the prepared soils they need. The preparation of tree seeds has not been organized among Russian foresters: the target was only 56 percent met.

The disappointing results of forest industry workers' labors is to a great extent explained by the management style of enterprises and associations not having changed substantially and not fully meeting modern demands. Improvements in the economic management mechanism, began at the party's initiative, are based upon giving collectives economic independence and upon the direct dependence of their welfare on final results of work. We more frequently talk and write about economic methods in management. These are included in the Draft of the USSR Law on State Enterprises (Associations), which has been discussed throughout the country. Alas, in practice staffs at forest sectors frequently use old methods in their interactions with labor collectives and are attracted to directive methods of management.

Our country is approaching its jubilee -- the 70th Anniversary of the Great October Revolution. It is a matter of honor for its forest industry workers to successfully fulfill the socialist obligations assumed for this famous date. This requires a decisive rejection of excessive organization, formalism, red tape and petty supervision. The doors must be widely opened to everything new and progressive. This is a requirement of the times.

11574
CSO: 1824/273

KARELIAN TIMBER SUPPLY, PRODUCTION PROBLEMS DISCUSSED

Moscow PRAVDA in Russian 22 May 87 p 2

[Article by V. Stepanov, first secretary, Karelian Obkom: "Forests and People: Why Cellulose is Being Hauled into Karelia from Sakhalin"]

[Text] Petrozavodsk--Much has been written and said about how, because of its favorable geographic situation and the presence of railroads, Karelia has long been one of the intensively logged regions. As much wood as needed was used. For many decades the allowable cut was exceeded by a factor of 2 and even 3. This was considered a temporary phenomenon, but over the years nothing has changed.

Plans were increased. In the taiga temporary settlements for temporary loggers sprang up like mushrooms. The psychology of temporary workers developed and strengthened on this fertile soil. "We have a century before things become obvious." Now there are only 370 million cubic meters of timber left in the Karelian taiga, while twice as much has already been logged.

However, processes of another order have been taking place parallel to this. The axe and the saw have promoted the rapid development of lumber, wood processing and pulp and paper sectors. From being a supplier of raw wood, Karelia has turned into its largest user. In addition to lumber, our forest complex now supplies the economy with cellulose, produces more than a third of the country's newsprint and more than half its paper bags. At the most, there are only reserves for 25-30 years more work. The psychology of the temporary worker is still not yielding its position in the center and in localities.

For a long time the obkom and all soberly thinking economic managers have been thinking about the Karelian forest complex's fate. Already freight cars full of cellulose are rolling across the country from Siberia and even Sakhalin. Gigantic pulp and paper mills and sawmills do not stop.

The solution is to put forest use in the republic on a strictly scientific, economically profitable basis, make it sustained yield and permanent. Solutions to these problems require the combined efforts of all organizations working in and on the forests.

Two years ago I got a close look at life in the settlement of Porosozero. The main impression I got was that the people working in this massive expanse of forest with pine trees all around them and performing the same jobs, are fragmented. This is detrimental. Up until the beginning of last year logging operations, sawmills, forestry units and forest chemical units were keeping house in Porosozer. Forest reclamation workers were also laboring there. About 10 independent offices and as many managers were working in parallel. Each had their own production and material-technical base. All this at a settlement of 5,000 people. This is found throughout Karelia. The thought automatically comes to mind: how absurd for the organization of a homogenous production operation.

Life itself is forcing us to break with old habits. In 1984 the CPSU Central Committee and USSR Council of Ministers decree: "On Improving the Use of Forest Resources" was passed. Based on it we have repeatedly turned to competent organizations with requests to examine and support our suggestions for creating a unified forest complex in the republic.

Although they were not rejected, these suggestions have still not been turned into specific deeds. Only thanks to the CPSU Central Committee was it decided to begin this work under the aegis of a single master -- the Karellesprom All-Union Forest Industry Association.

Thus, back in 1987 the Karelian forest complex started restructuring and the creation of a territorial-production formation which would be needed for assuring the optimal combination of sector and territorial management and for comprehensive economic and social development. The correct direction was taken.

Because only the first steps have been taken it is too early to talk about final conclusions. However, it is already apparent that the elimination of departmental barriers, including those within a single ministry -- USSR Minlesbumprom -- a purely organizational measure, rapidly had an impact upon the results of economic activities. Karellesprom had some of the best indicators in the country. Last year it fulfilled its plans for planting trees, taking care of young tree plantations, producing commercial timber, furniture, paper and cellulose. Thanks to improved labor productivity and better capacity utilization production volume increased. The main thing is that the total stand to be cut and logged timber are better utilized. Five percent more commercial output is obtained from each cubic meter. This was in only one year.

Enterprises have started doing better in building and repairing housing, and cultural-service facilities. Houses are equipped with central heating, running water and sewage lines. All this is through the unification of resources from numerous organizations.

Restructuring began with cadre selection and assignment. All directors of comprehensive enterprises are approved by the obkom buro. Several have had to be replaced. It was feared that now they would be questioned more about grown timber than about cut.

We also expect great changes in forestry. During the 12 Five-Year Plan it is estimated that more than 80 percent of cutover area will be reforested by tree farm methods. Nursery area will triple. Measures are now being taken to convert tree seed raising to a selection-genetic basis.

However, not everything is succeeding. Management structure requires further improvements. In our opinion, there is an urgent need to for pulp and paper enterprises now directly subordinate to associations in Moscow to be included in the territorial forest complex, to say nothing of those nine forestry units, which still remain outside it because of resistance by some workers in the center, not wishing to reckon with the realities of the situation and of restructuring. The statute on this should be approved, and it should be given expanded rights in planning, financing and material-technical supply.

This is necessary because the work of the complex is severely hindered due to imperfections in the statute on the Karellesprom Association and its imprecisely defined rights. Even what rights the association does have are constantly violated by USSR Minlesburprom. In spite of the decree's authorizing directive organs in the association to sell up to 50 percent of above plan output at their own discretion, throughout last year the USSR ministry repeatedly increased the delivery plan. This considerably complicated already difficult sales targets.

Last year the compilation of the timber supply plan and the related production plan was especially difficult. Seemingly, it would be clear to everybody that Karelia above all has to be supplied with raw material for pulp and paper enterprises, export lumber production, and to meet firewood requirements. Nevertheless, during the compilation of targets for 1987, there was a five month long paperwork storm between the ministry and the Karellesprom Association. Proposals from above were not within a single framework. Many factors were not taken into consideration -- tree species, extent of logging, times and directions for deliveries, proposals for the rational use of raw materials. All this could have been made in August, based on five-year plan targets and association apparatus workers' efforts directed towards organizing plan fulfillment. But this was not done. As a result, there were unproductive losses of wood and enterprise idle time because of raw material shortages.

Today there is a fully grown problem with regard to long term forest use. The fact is that the actual condition of exploited reserves and the amount of timber cut in the republic do not meet the requirements of comprehensive enterprises. Reserves of mature and overmature timber have been reduced by more than half. Many logging units have almost exhausted their timber stands. The allowable cut is excessively taut. Suprisingly, USSR Minlesbumprom is not reckoning with this. Its plan is oriented towards overcutting the allowable cut of conifers by more than 30 percent.

Increased plans for conifer raw materials compel the overcutting of such trees and reductions in the use of broad leaved species. To avoid this it is necessary to accelerate the creation of separate flows for the use of broad leaved timber at the Segezhskiy TsBK [Cellulose and Paper Combine], reconstruct the thermomechanical pulp plant at the Kondopozhskiy TsBK and the

chipboard plant. It is time to increase the use of broad leaved timber for lumber and for house construction.

Gossnab and USSR Minlesbumprom continue to plan the haulage of sizable amounts of timber out of Karelia, even though its own wood processing enterprises often stand idle due to lack of raw materials. Even now there are no carryover stocks for the first half of the year. This is where two-three shift work is organized!

These planning errors, radically contradicting the spirit of the times, lead to disruptions in raw material supplies to paper makers and woodworkers, disrupt their confidence in people and in the need for restructuring, as required by the January (1987) CPSU Central Committee Plenum. Can it really be considered normal for Karelia, with an economy based mainly upon forest industries, not to be able to meet even its own population's demand for furniture, while it should supply such products to other regions?

We have come to the solid conclusion that all these difficulties are created artificially by managers of the sector and planning organs. It is necessary to restructure, this cannot be put off. The strategy for permanent and sustained yield forest use requires a different approach not only to the forest complex in Karelia, but also, it seems to us, in other regions. It is time to have such a strategy in forestry and to cease to work in this sector according to the "like in a dark woods" principle.

Principled and new solutions to social problems are also needed. In the republic today there are 138 forest settlements with a total of 135,000 people. A little more than half the houses are built from panels. In most forest settlements, with 600 to 1,000 people each, until recently there were no plans for engineering amenities. However, it is such settlements, like comprehensive enterprises, which are becoming permanent and intended for long term use. Our main concern is about their social services.

Each such settlement, regardless of size, should have a water system, artesian wells and water tanks. To convert them to central heating small economical boilers should be built, but there are still no successful plans. There should be new perspectives in the construction of schools, clubs, service centers and sports facilities.

We intend to develop our own construction base in the Minsevzapstroy [Ministry of Construction for the North West]. USSR Minlesbumprom should participate in its creation to expand housing construction. There are grounds to assume that people's creative initiative, the extensive introduction of progressive technologyandwork organization will help in these tasks and in honorably celebrating the 70th Anniversary of the Great October Revolution.

11574
CSO: 1824/275

CELLULOSE INDUSTRY CRITICIZED FOR POLLUTING WATER SUPPLY

Lake Ladoga Threatened

Moscow SOVETSKAYA ROSSIYA in Russian 10 May 87 p 1

[Article by Pavel Gutiontov: "The Lessons of Ladoga"]

[Text] "What are we doing to nature?!" I had just opened a new copy of SOVETSKAYA ROSSIYA on 8 May and read the regularly appearing material on this theme: "Discharge into clean water" about how the Cherepovets Metallurgical Combine is again damaging the Rybinsk Reservoir. The reason is elementary dishonesty on the part of several ordinary workers. Unfortunately, however, even greater damage is caused by open neglect of environmental protection measures which are quite often demonstrated by managers of enterprises and entire departments. It is no secret that low priority is placed upon the construction of these water purification installations and only the slightest efforts are exerted in running them. They are often "economized", but who calculates how we (and our children and grandchildren) will pay for such economies.

Recently your newspaper and other central publications have written much about the situation at Lake Ladoga in connection with activities at the Priozerskiy [Lakeside] Cellulose Plant. We were all deeply grateful to recently read about the decisions the CPSU Central Committee Politburo made in this regard.

As you know, there was the experience at Lake Baykal, where it was also necessary for the highest authorities to intervene. Now we have the lessons of Ladoga. Why aren't the necessary conclusions drawn from these?

A. N. Golovin,
Moscow

Probably it is not worth it to again relate the dramatic events which took place on the shores of Lake Ladoga. In the past half year this newspaper has returned to them four times. The essentials of the matter are: For decades the Priozerskiy Cellulose Plant, built prior to the war without any purification installations, has polluted this very large body of water and as a result threatened Leningrad's water supply. As regards Priozersk and neighboring settlements, water is already being hauled in tanks to some of the them. While previously managers persistently fought back any complaints with promises to

put things in order (the magic word "plan" outweighed any other considerations, by last autumn the situation had become genuinely critical. The plant was shut down and locked.

I recall a conversation with A. Barkalov, director of the Priozerskiy Cellulose Plant. Right before my eyes S. Saakyants, deputy main state sanitation doctor for the USSR had just presented him with a decree shutting down the plant's production activities. "What do you think you will do", I asked, when we were left alone in the office. "We will not close down for him', Aleksey Vladimirovich said irritably. "He will not prevent anybody from neglecting state interests and the interests of the large labor collective..." Then he added, "The sanitation doctor is simply afraid of responsibility."

Now it is especially important to think about why the plant director is not afraid of responsibility. This plant has poured thousands of tons of waste into a very clean Lake Ladoga (and from there it went directly into the water supply lines for the entire oblast). After all, he hardly turned out right in "not permitting" the sanitation doctors' attempts for seven months while the plant stood closed. Professional and civil courage was fully required of them, as at this stage they were essentially standing alone "on the shores of Ladoga." Keep in mind that this is also an important lesson from the Ladoga events.

Finally dots had been put on all the "i's". There is to be a thorough study of the condition of the Ladoga basin ecological system, a scientifically based longterm forecast prepared and additional environmental protection measures for this zone specified. It is foreseen that the Priozerskiy Cellulose Plant will be reprofiled so that its production processes will not pollute the lake. Party and state organs are to examine the question of personal responsibility of managers guilty of breaking deadlines for constructing environmental protection projects and making unsatisfactory use of existing purification installations.

All this is a logical result of the thoughtless outrages against nature which have been going on for decades. The Priozerskiy plant is only the most vivid exampleof this. Other enterprises located along the lake's shores have made their "contribution" to Ladoga's pollution. Undoubtedly first place here belongs to enterprises in the same Ministry of the Timber, Pulp and Paper and Wood Processing Industry. They account for more than 70 percent of all waste water discharged into the lake. A biological purification system is operating only at the Syasskiy TsBK [Pulp and Paper Combine] and it cannot handle the huge flowof polluted industrial waste waters. Not even the most lenient criticism is directed toward waste water purification at plants in this same department which are located in the city of Pitkyarant and the settlement of Lyaskel in the Karelian ASSR.

There are strong attempts to "not neglect" representitives from other departments using Ladoga's waters. Specialists note that the Pashskiy and Sputnik Animal Husbandry Complexes have become large sources for lake pollution. Technological solutions to neutralize and disinfect these wastes and discharge waters have still not been proposed. Nevertheless, the enterprises are expanding. With the introduction of the second section of the

hog feeding complex at the Sputnik, its environmental impact will be equal to that of an industrial city with a population of 2 million.

Can Ladoga handle it?

The Novogorod Association "Azot" [Nitrogen], the Lesogorskiy Artificial Fibers Plant, the Kirishskiy and Boksitorgorskiy Biochemical Plants and the Glinozem Association are contributing their shares to damaging the lake. Water transportation remains a serious pollution source. Petroleum products washed out from ships are now poured directly into the lake. Several rivers flowing into Ladoga are being damaged by sunken timber from timber floating operations.

Ladoga is in serious danger. This was stated three years ago in a special decree on the protection and rational use of natural resources in the Ladoga, Onega and Ilmen basins. A vast plan was outlined. Unfortunately (and this should be frankly admitted) it was not fulfilled.

Why were the most authoritative decisions and decrees passive in face of departmental interests? This is the first question we must answer when discussing the lessons of Ladoga.

Recall how confident the Priozerskiy Plant director was that nobody would allow the enterprise to stop. Unfortunately, this confidence has some basis. The plant produces one-fourth of the country's viscous pulp. The mass consumption goods produced each year from it are worth 1.5 billion rubles. This became the subject of ceaseless speculation as soon as the discussion began about the plant's negative impact upon the environment. For decades the department had essentially been engaged in basic intimidation, threatening immediate and huge losses to everyone who demanded the observation of sanitation and other norms. Figures with large numbers of zeroes cast a spell. Then there were always promises -- to examine, intensify and work out measures. These promises were never kept, then new ones were made.

The plant in Priozersk was used to living in debt to the future. However it very quickly started running up such percentages that it became an absolutely insolvent debtor. Today, with increasing rapidity, measures are being worked out to save the enterprise which, at best, will take years. Minlesbumprom no longer has this time. Its persistent suggestions to sacrifice Ladoga and harm the health of those living along its shores have "not passed."

Another decision was also protested by this ministry: reprofile the plant to produce ecologically clean products. The Party's priorities with regards to social problems are not a matter for the future, but for the present. They have to be reckoned with now. This means that the plant, shut down by the sanitation doctors, will not even start up to half its capacity as proposed by the ministry. It also means that we will not be receiving 1.5 billion rubles worth of mass consumption goods annually...

The events at Priozersk showed how necessary it is to have economic conditions under which it would be simply unprofitable for a department to neglect the environmental protection measures. Until then it is considerably more

profitable to simply ignore any established norms. Thus, in Shchuchiy Bay, into which the plant discharges its wastes the maximum permissible concentrations for 13 substances detected by sanitation doctors were exceeded by several hundred (!) fold. However, the director of the Priozerskiy Cellulose Plant and his minister recalled these figures so serenely that it seemed that they were meaningless nonsense. Both showed readiness to suggest to doctors: we are ready to assume all responsibility for consequences. How easily we assume somebody else's responsibilities!

Here is another lesson from Ladoga. This has to do with imperfections in the mechanism which should prevent departmental arbitrariness towards nature. Just think about this. For almost two decades there has been an intense struggle over the plant at Priozersk. Not only environmental protection organs and sanitation doctors, but also the procurator, the Gorispolkom and finally the Lenoblispolkom have come to the lake's protection. And it has all been in vain! True, not everybody could, at each stage, shown the needed principled approach, but there is vivid evidence of their serious vulnerability to pressure from economic managers.

For example, the 14 year old statute on sanitary protection is clearly out of date. The rights it gives the individuals solemnly called sanitary doctors (rayon or city or oblast) are more declarative than real. In any case, departmental violators most often have the possibility of getting their way. It is hardly accidental that at the sanitation service's request a special militia post was set up right by the plant's gate. If not, the plant could have (illegally) "opened" without preliminary permission...

Finally, there is another very important lesson from the Ladoga shores. We once again are witnesses to the huge creative force of openness. The broad discussion, which moved from offices to the open air, made it possible for us to stop the transfer of water from northern rivers, protect Lake Baykal and decide the question about the monument at Poklonnaya Gora... Here was another case -- Ladoga was protected not only by those who were obligated to do this, but also by scientists, writers, doctors and workers... It turned out that they also had something to say. It is noteworthy that in the final account their arguments were decisive.

Something else is also important here. Since October 1986 our newspaper has written about the Priozersk plant four times. Minlesbumprom has not answered a single article. We know that our colleagues from other central publications did not get any answers from their critical articles about the problem at Ladoga. This lack of desire to explain things as shown by appeals to one's position is in itself a substantial deviation from openness. For seven months the Ministry has persistently pushed its draft plan and kept silent, hoping that the decision made would, by itself, negate any criticism.

This did not happen. The decision made by the Politburo turned out to be the one expected by everybody who was not indifferent to the fate of this very precious part of the Fatherland. The main emphasis was placed upon state interests, and not upon interests disguised as those of the state.

This was not an easy decision, but today none other was possible.

This, probably, is the main lesson from Ladoga. Our readers should make their conclusions from this.

Timber Minister Responds

Moscow SOVETSKAYA ROSSIYA in Russian 23 May 87 p 1

[Article by M. Busygin: "An Answer to Critics 'The Lessons of Ladoga'"]

[Text] The USSR Ministry of the Timber, Pulp and Paper and Wood Processing Industry closely examined the critical articles on environmental protection problems in the Lake Ladoga Basin published in SOVETSKAYA ROSSIYA.

To improve ecological conditions in the area around Lake Ladoga and to meet the demands of environmental protection organs, on 2 February 1987 the Ministry isued an order to reprofile the Priozersk Cellulose Plant to produce wood products, restore Lake Drozdovo, eliminate bark dumping and to implement other environmental protection measures.

The ministry prepared and, upon agreement with other concerned ministries and departments, in March 1987 presented USSR Gosplan a draft of a decree to reprofile the Priozersk Plant and to organize similar production operations at other enterprises in the ministry. The USSR Council of Ministers authorized USSR Gosplan to present the draft to the government.

Under these conditions we assumed it would be possible to answer all the newspaper's articles appearing after the appearance of the USSR Council of Ministers' decree. Apparently, this conclusion was not justified. We underestimated the acuteness of the problems at Ladoga and were not open about the measures being taken by the ministry.

Also, the ministry is implementing measures throughout the region in accordance with the USSR Council of Ministers decree of 7 December 1984 "On Additional Measures for the Protection and Rational Use of Water and other Natural Resources in the Basins of Ladoga, Onega and Ilmen Lakes."

At the Syaskiy Cellulose-Paper Combine a station for purifying waste waters from cardboard-paper production has been put into operation, the aeration system in the aeration tanks and distribution canals has been replaced by offsite purification facilities, a system for removing excess active sludge is operating, and an experimental system for using lignosulfates has been put into operation. To intensify monitoring of the air over the towns of Sortaval, Kondopog, Pitkyarant and Priozersk and the settlement of Layskl, the ministry decided to organize air pollution observation points. In 1987 USSR Goskomdigromet [State Committee for Hydrometeorology and Environmental Control] allocated the ministry a fully equipped laboratory to do this.

Upon agreement with RSFSR Minvodkhoz [Ministry of Land Reclamation and Water Resources] the ministry approved a schedule for measures to completely curtail the discharge of untreated waste waters from 30 enterprises in the Ladoga basin.

On behalf of the USSR Council of Ministers, starting on 2 March 1987 USSR Gostroy and USSR Gosplan, with the participation of USSR Minvodkhoz and RSFSR Minvodkhoz and other concerned ministries and departments have been working on a comprehensive program for the construction of water treatment facilities during 1986-1990.

Questions on improving environmental protection activities at pulp and paper enterprises, including those located in the Ladoga area, were examined by the ministry board on 27 April 1987. Its decisions are being constantly monitored.

11574
CSO: 1824/274

BSSR TRADE MINISTER, STORE DIRECTOR ON SECTOR CHANGES

Moscow PRAVDA in Russian 15 May 87 p 3

[Discussion between BSSR Minister of Trade N. Petrushkevich and Belarus Department Store Director G. Shevelevich, with commentary by BSSR Council of Ministers Chairman N. Makayed , reported by PRAVDA correspondent A Simurov (Minsk): "Bulletins and Life": first paragraph is source introduction]

[Text] On 1 January 1987 the BSSR Ministry of Trade and all its subdivisions started to operate under conditions of complete cost accountability and self-financing. What changes did this generate in the branch? This is the topic of discussion of Republic Trade Minister N. Petrushkevich and Belarus Department Store Director G. Shevelevich.

N. Petrushkevich: I think that the most immediate result of changing to operation under the new conditions is respect for the customer. This was clearly not the case in the past. Commerce did not have workable levers which could be used to improve the quality of service. The salaries of salesmen and store directors have been realigned to depend directly on sales. This has had the immediate result of fostering enthusiasm and a sense of urgency in customer service and searching for reliable suppliers. In this connection, we order and purchase only merchandise which is in demand and does not lie around gathering dust in bases. Otherwise there will be losses which would have to be made up out of the pockets of the people involved.

G. Shevelevich: This is right, of course. However, this being the case, give us enough merchandise. The plan which you set for us for this year is not covered by 20 million rubles' worth of goods.

N. Petrushkevich: I do not have the merchandise, as you know. It is not going to appear as a gift from heaven. You should look for help from other sources of goods supply, such as the additional resources discovered in the republic. You are involved in commerce; start searching. You have authority. Improve the ordering system to acquire items that do sell. Do not sit idly by doing nothing about it.

We have already had some initial success. We have been able to saturate the market with a number of items which were previously considered to be in short supply. What do I have in mind? Many types of footwear, outerwear and underwear made of tricot, the school uniform, children's overcoats made of artificial fur, fashionable women's blouses, and many other items. There has

been a 250 percent increase in production of goods which rival the best foreign makes.

CUSTOMER COMMENTS. "I purchased two short-sleeve shirts to wear in the summer. We do not have such colors and quality in Kharkov," said N. Nosov in the Muzhskaya Odezhda store. "I was able to obtain children's slippers in the department store here. The salespeople showed me everything, then they ran to the warehouse to make sure I got what I wanted. Quality of service is improving. It seems that salespersons are now paid on the basis of sales."

G. Shevelevich: Now the customer has much to like in the display room. In our department store, for example, we have set up about 500 units of technological equipment: all kinds of shelving, lifts, conveyers, warehouse carts, display stands, etc. They were made by our superiors - industrial enterprises of the republic. Advertising and merchandise display have become more attractive.

And salespersons' performance? They exhibit as much interest in selling as the customer does in acquiring an article. The motivation is simple: the greater the profits, the larger their salaries. In addition, the customer fills out a form rating the quality of service and leaves it with the salesman. The number of these forms determines the amount of award and bonus.

Or this situation: Say you do not find the item you want in the store. Do not worry. Action is taken on your order and you will be contacted by telephone or mail when your article is received by the store.

N. Petrushkevich: We made efforts to introduce this kind of relationship between salesmen and customers way back when we were preparing to work under the new conditions. We administered training for personnel to improve their knowledge of economics. For managers and specialists in commercial enterprises we provided a 36-hour program of instruction, while we gave blue collar workers 12 hours. More than 100,000 persons underwent the training. Even with all that, there are still difficulties.

G. Shevelevich: We must use the step-by-step approach to dismantle the structure of the old production relationships. The structure has been found unsuitable for the new conditions. We have organized cost-accountable brigades, which include salespersons, checkers, merchandising specialists, warehouse workers, cleaning women, and section chiefs. Each brigade has its own capital return rate and trading cost schedule. Salary is directly tied to personal labor input. How did the system operate previously? It took several hours - even several days - to restock empty shelves. Now shelves are refilled with stock from the warehouse in the twinkling of an eye.

N. Petrushkevich: It should be understood that there are additional levers that can be used to help heighten employee interest in work improvement. I have in mind the possibility of growth in social development funds of our enterprises. These monies are spent on residential construction, erection of

dispensing sanatoria, children's institutions, etc. At the present time this amounts to 34 million rubles; in the last year of the five-year plan the total will rise to 50 million rubles. This money must be earned, of course. The only way this can be done is by striving to increase the income-producing capacity of each store. The ministry has done its part to bring about simplification and cost reduction in branch management by abolishing the three-tier system of wholesale selling and liquidating eight republic stores, with the ministry apparatus picking up their functions.

The most important thing here is for each worker to prevent occurrence of losses, especially in public feeding. Everything depends on initiative. We could walk through the streets of Minsk and visit dozens of new public feeding enterprises, such as the food cafe Okhotnik; alcohol-free snack bars Sem Pyatnits and Batleyka; the fast food restaurants Bulbyaniki, Kofeynaya, Sdoba, Sbiten, and others. Sixty enterprises have already been opened in converted buildings; the total will increase by 50 by the end of the year.

CUSTOMER COMMENTS: "Previously there could be no thought of buying fresh apples in April, but now - help yourself!," said housewife N. Dubko in a produce store. "But the produce we grow in our republic - cabbage, carrots, garlic - is not available. Please note that there is none here, but across the road it is available. The difference is brought about by the boundary between the two regions and by the resulting boundary between bases. It would be nice to eliminate the boundary."

G. Shevelevich: This all is due to omissions on the part of managers of trade organizations, of course. We will set things right. But there is much we cannot do anything about.

N. Petrushkevich: Such as a poor start in introducing the cost accountability and self-financing systems as a result of poor preparation for the system. The norm-setting and guidance documents have been a long time in coming, while documentation dealing with commercial work has not been issued at all. For example, how are we to accept goods which have not been manufactured in accordance with agreements made relative to merchandise variety? There also is a lack of guidance relative to filling out requests and orders, compiling production programs, and arranging wholesale fairs under the new conditions. A number of bulletins contain inaccuracies and contradictions. The source of financing of expenses incurred in personnel training has not been identified. Provision has been made for stable operation of a salary fund, but amounts of deductions for the budget and for production and social development have not been endowed with such stability. With such a state of affairs, how are we to properly determine a source of monies to cover salaries?

G. Shevelevich: We have not received from the Gosbank an answer to the question: How is the department store to be credited in the light of the new requirements? The USSR Ministry of Finance is in no hurry to reorganize itself and review its ties to trade enterprises; it is comfortable with the old instructions.

N. Petruchkevich: The quagmire of limitations and stipulations constitutes a heavy burden. This includes personnel staffing and expenditure accounting. Another problem is caused by competition between existing plans on the one hand and the myriad tasks assigned on the other.

G. Shevelevich: A great deal of confusion prevails. A case in point is the erection of automated control systems - ASU's. We set up two microcomputers and acquired a third machine. We regard the ASU as an important tool. But who will be using the machines? Naturally it is necessary to increase the number of specialists, but this staffing is limited by norm. So much for independence.

N. Petrushkevich: Nevertheless, you must admit that most plans and actual indicators have been revised to reflect the economic norms. This is very important, since they are prepared for use during the entire five-year period and are not subject to change. Now you are in a position to know beforehand the purpose and amounts of money you need, thus permitting you to make your plans confidently, while taking possibilities into account.

G. Shevelevich: Theoretically, this is true. But in reality? Unfortunately, the new goods turnover plan never was justified in the past and is not now. The result is that we still cannot make a proper determination of our receipts, because we have not received a realistically justified goods turnover structure.

COMMENTS BY BSSR COUNCIL OF MINISTERS CHAIRMAN N. MAKAYED : "I agree in general; much was done during the preparatory period and the first months of working under the new conditions. However, the republic did not accomplish the goods turnover plan for the first quarter. We were about a half-day short. State trade and on down was short by about 2 hours of work. What is wrong? There is a shortfall of actual goods. The goods turnover set for the republic for this year is not backed up by goods.

"It should be understood that we are not sitting around twiddling our thumbs, or, as Belorussians say jokingly, 'We are not sleeping under our hats.' In April trade workers were able to make up the difference and fill the first quarter gap, fulfilling the four-month goods turnover plan. The government set additional tasks for republic enterprises to produce above-plan goods needed by consumers in the amount of 240 million rubles. Trade organizations and wholesale bases pledged to look for 200 million rubles' worth of goods beyond the boundaries of the republic.

"Nevertheless, goods provision and the goods turnover plan are still not in balance. Under the circumstances, how are we to outline the dynamics of development of retail and wholesale merchandise turnover and receipts to 1990?

"However, let us not pass the responsibility to someone else. There are some things we can do something about on our own, of course. The way work is organized could be improved, and commercial service is less than satisfactory. Some stores are overstocked, while others have no merchandise to sell. The

same situation prevails at the bases. All because the system still does not deal effectively with keeping records of goods both stocked and in a state of transition. Shortcomings are also evident in planning of deliveries to stores and outlets, with the result that some of them have a difficult time coping, while others work at a leisurely pace and receive undue credit for examplary performance.

"No less important is another factor. The USSR Mintorg [Ministry of Trade], Minfin [Ministry of Finance], Goskomtrud [State Committee for Labor and Social Problems], and the Gosplan should follow precisely and strictly the letter and spirit of the Central Committee and USSR Council of Ministers decree 'Improvement of the Planning, Economic Motivation and Management of State Trade and Consumer Cooperative' and refrain from burdening it with reservations and manifold prohibitions."

There are many problems. Of course, the minister and the director of the largest department store in the Belorussian Republic, as well as the entire collective of the republic Mintorg system, understand that the new economic mechanism will not start to function all by itself. People are learning cost accountability methods and their practical use. But complications are created by customers and reality. This is why we have the reconstruction. It is important to incorporate experience more widely, commit fewer errors, and always remember that the main purpose is to satisfy the demands of the Soviet people.

13005
CSO: 1827/84

COKING COAL, EXTRACTION, USE STUDIED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 4, Apr 87 pp 89-93

[Article by I. Bogurayev, candidate of economic sciences: "Increasing Extraction and Use of Coking Coal"]

[Text] Our "Basic Directions of the Economic and Social Development of the USSR over the Period 1986-1990 and to the Year 2000" assigns the achievement of greater economies one of the most important roles in the effort to intensity production. Beyond that, plans call for making economies in the consumption of resources the key factor in progress achieved in satisfying our increasing national demand for fuel, energy, raw materials and other products. The country's consumption of these resources in ever-increasing volumes and the dramatic increases we are seeing in the cost of extracting and producing them, increases due to the operation of factors with which we are all familiar, objectively dictate the need to arrive more expeditiously at an integrated, comprehensive solution to the now urgent problems involved in insuring more efficient and more economical utilization of these resources. Under present-day conditions, moreover, preference must be given to technical and economic-organizational solutions which will enable the country to exploit its natural resources more efficiently and at the same time achieve optimum results in its economic performance.

This type of approach becomes a matter of particular urgency in the case of the coal and ferrous metallurgical industries, which with respect to the end products involved necessarily stand in close relationship with one another. After preparation, virtually all coking coal, which is for the most part mined underground, is today going to enterprises of the USSR ministry of ferrous metallurgy, which make the coke.

As the most important form of fuel used in metallurgical production, coke is going to play a major role in determining the pace of growth and progress not only in ferrous metallurgy, the largest consumer of this product, but in a number of other sectors of the national economy as well.

The following figures (in percent) give a general picture of the pattern of the country's coke consumption: cast iron production - 82, nonferrous metallurgy - 3, chemical industry - 3, foundry operations - 5, other consumption 7 percent.

Our country possesses enormous projected reserves of coal, but as of January 1, 1985 these reserves were estimated to include 425.2 billion tons of coking coal, of

which 67.5 percent is represented by what are referred to as the caking coals "Zh," "GZh," "KZh," "K_1," "K_2" and "OS". At the present time and for the foreseeable future as well, it is precisely these coals which constitute and will constitute the primary raw material base for our ferrous metallurgical industry. The hypothetical reserves of these coals are concentrated primarily in Siberia and the Far East, while only 9.7 percent is located within the European USSR.

Looking now at our proven reserves of coking coal of categories A + B + C_1, these total some 69.37 billion tons, or 16.3 per cent of hypothetical reserves, which includes 39.3 billion tons of the scarce caking coals. Deposits in the European USSR and the Karaganda field in the Kazakh SSR have now been adequately explored and are being worked fairly intensively.

As far as the other areas are concerned, as a proportion of total hypothetical reserves of these coals, for example, proven reserves in the Kuznetsk and Southern Yakutsk fields represent 18.3 and 11.4 percent respectively and 3.1 and 3.5 percent in the Eastern Siberian and Far Eastern economic regions, which points to the great potential for development of coking coal production operations in these regions, to include production of the more costly grades.

Nationwide, reserves of coking coal currently in production taken together with those which have been prepared for production account for more than 40 percent of proven reserves. Over 73 percent of the proven reserves are concentrated in the Donetsk and Kuznetsk fields, the Kuzbass now holding out the greatest promise in this respect. To date, some 29.3 percent of the field's total proven reserves have now gone into production or have been prepared for production, while in the Donbass this figure is almost 54, and in the Karaganda field 74, percent.

The 20 years from 1965 to 1985 have seen the role of these fields in supplying industry, and first and foremost in this regard the metallurgy industry, with these coals undergo fairly dramatic change, which we can see in Table 1 (where total national extraction of coking coal is assumed to be 100 per cent).

It should be noted here that over the period we are looking at the proportion of coking coal of all ranks produced by the Donetsk field dropped as a component of total national production of this coal from 58.2 to 36.9 per cent. A similar trend can be observed in both the Kizelovskiy field and in deposits in the Georgian SSR. At the same time, production of coking coal from Kuznetsk, Karaganda and Pechora fields has risen. The view over the long term is that, for all practical purposes, mines in the Kizelovskiy and Lvov-Volhynian fields and a great many mines in the Donbass and Kuzbass are approaching the limits of their ability to produce coking coal.

By way of compensating for these diminishing capacities and ensuring our ability to satisfy national economic demand for coking coal, the USSR ministry of geology has undertaken to explore areas which still can offer adequate reserves of this resource. According to data prepared by the planning institutes, these reserves are making it possible to add several dozen new mines, to include a number which will be producing some of the scarcer coals, and to modernize a number of existing enterprises, which will extend their productive life. So, with the exhaustion of some of our mines and reserves and then maximum exploitation of mines currently producing along with our reserves, it will still be technically possible to produce coking coal in volumes

sufficient to satsify our overall national economic demand for this resource as defined for the long-term future in the USSR energy program.

Table 1
(in %)

Field or deposit	Coking coal production				
	1965	1970	1975	1980	1985
Donetsk	58.2	51.1	48.9	41.6	36.9
Kuznetsk	27	28.5	31	30.9	31
Karaganda	7.9	10.3	10	15	15.8
Pechora	3.4	7.7	8	9.9	10.2
Kizelovskiy	2	1.3	1.1	0.7	0.5
Lvov-Volhynia	-	-	-	1.1	2.3
Southern Yakutsk	-	-	-	-	2.6
Georgian deposits	1.5	1.1	1	0.8	0.7

Table 2
(in %)

	Caking coal as a component of total coking coal			
	1960		1985	
	In reserves	In total production	In reserves	In total production
Ministry total	64	71.9	55.4	62.7
Field breakdown:				
Donetsk	68.1	69.4	42.7	51.2
Kuznetsk	52.2	52.9	51.1	43.2
Karaganda	97.6	99.1	99.1	100
Pechora	100	91.2	71.1	71.8
Southern Yakutsk	-	-	100	100
Lvov-Volhynia	-	-	8.5	6.4
Kizelovskiy	100	100	73.4	70
Georgian deposits	60.2	43.4	21.1	36.4

In this connection, however, we need to take account of the disproportion between reserves of the scarcer caking coal as a component of total reserves of coking coal, the requirements of industry and the rates at which these resources are being recovered. This coal has been being extracted atsurpassing rates for a long time now in virtually all of our most important fields. The dynamics of the structure of these reserves and production figures covering the past 25 years (1960-1985) for the USSR ministry of the coal industry can be observed from the data in Table 2.

Reserves of caking coal of ranks "Zh," "K" and "OS," which constitute the primary component of the coking charge, are now being consumed at a fairly intensive pace. In the Donetsk field, for example, the Zh- and K-rank coals account for 19.7 and 11.9 percent respectively of total reserves of coking coal at existing enterprises and 22.2 and 13.4 percent of production. We observe a similar situation in the case of the working of beds of K-rank coal in the Kuznetsk and Karaganda fields. Nationwide, the reserves which have been thoroughly explored and prepared for production currently contain less Zh- and K-rank coal than deposits currently being exploited.

Overall, ferrous metallurgy's demand for coking coal is being satisfied, but the problem is that for a long time now the rank structure of these coals has not entirely measured up to the requirements of the by-product coke industry, the situation here growing more difficult from one year to the next.

This problem is due, in addition to the high rates of extraction and the limited nature of the reserves of the most desireable caking coals, to the degradation of the quality of these coals associated with the transfer of mining operations in a great many mines to lower-lying beds, this being the case first and foremost in the Donbass. The last 10 years, for example, have seen production of the caking coals in the Donetsk field drop from 56 to 46 million tons a year. Among the explored sectors in this particular region, we know of only two in which the first working stratum is above 1.2 km which present comparatively favorable geological conditions. But the adjusted cost of extracting 1 ton of coal under these conditions is 1.4 times the cost of production in mines currently in operation in the Donbass. Since 1975, coking coal has been supplied in increasing volumes to enterprises within the republic from other coal fields to help satisfy the needs of ferrous metallurgy in the Ukraine. The 11th Five-Year-Plan period saw 46 million tons of coal brought in, which included 25.6 million tons from the Kuzbass; the transport costs involved here exceeded 440 million rubles.

There are now two basic approaches to the problem of overcoming the shortage of caking coal to meet the needs of ferrous metallurgy and other industries. The first involves the opening up of new mines and pits with the objective of increasing production of this coal, which of course entails enormous one-time capital investments followed by high operating costs. At the present time, for example, all coking coal taken together accounts for something on the order of 27 per cent of total production, but in terms of outlays to cover production costs it accounts for more than 40 percent. This is essentially what we could refer to as the extensive approach to the problem. The second approach would call for expansion of the raw material base of coal for coking and at the same time for cutting down on coke consumption by stepping up the pace at which we are introducing the advanced new raw material-saving production processes, first and foremost in the by-product coke industry and our blast

furnace operations. The latter approach is intensive in nature, although it, too, entails certain additional capital investments.

It should be observed that declines in caking coal resources are characteristic of metallurgical production all over the world these days, but what we are seeing is that most countries with a developed metallurgical industry are engaged in vigorous efforts to introduce resource-saving production processes. According to available data, Japan, for example, is producing 20 million tons, or 40 percent, of its coke by pelletizing part of the coal charge. Between 1970 and 1982 alone, twenty industrial thermal charge preparation facilities were built abroad with a total designed processing capacity of some 30 million tons of charge per year. We are also seeing increasingly extensive use made of processes whereby raw iron ore is blended prior to agglomeration, waste gas is used to heat the air in the blast furnaces, pulverized coal is injected into the furnaces as fuel and others, which are helping save substantial volumes of coke.

Unfortunately, however, our own ferrous metallurgy industry is still moving very slowly with the introduction of these coal- and coke-saving technologies. A method whereby the coal is crushed selectively which was adopted as long ago as 1973 by the metallurgy combine in Nizhniy Tagil, for example, a method which cuts down on coal consumption and saves coke in blast furnace operations, has to date been introduced by the by-product coke works in the Altay, and this despite the fact that this method can save up to 200,000 tons of the scarce caking coal for each million tons of coke produced.

We have also been slow in introducing in our by-product coke industry the thermal coal-charge preparation technology, whereby only weakly caking coal can be added to the charge to the extent of 70 percent without degrading the quality of the coke and the efficiency of the coke-oven batteries increased some 30-40 percent. This technology has been in use in the Western Siberian Metallurgical Combine since 1972, where the employment of this process was still being called for in 1983, and was introduced at the Donetsk by-product coke works in 1984. Both efforts have met with delays, however. The ferrous metallurgy industry has also been extremely slow to introduce other coal- and coke-saving technologies, to include such a highly promising method as the one involving the production of shaped coke using the comparatively inexpensive low-caking coals. This production process can be completely automated, which will make it possible to achieve fundamental improvements in both working conditions and the productivity of operations personnel.

We have not given adequate attention to efforts to organize production of coke from the low-caking and gas coals for nonblast-furnace processes, which consume some 10 million tons of metallurgical coke each year. Work is proceeding very slowly, and particularly in the petrochemical industry, on solving problems involved in the development of a technology for producing special-purpose caking additives to be used in making coke from heavy petroleum residues.

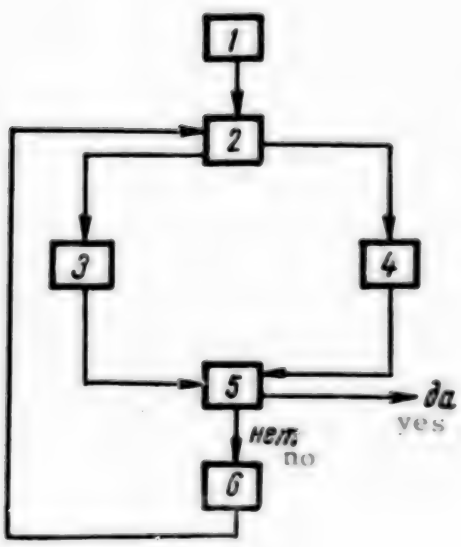
All this is making it more difficult to solve the problem of providing the ferrous metallurgy industry with high-quality coke and entailing additional, inefficient, expenditures of state resources.

In the meantime, according to the experts' computations, this industry's expenditures for ways to save one ton of caking coal are much lower than the cost of extracting and preparing it. To introduce within the by-product coke industry alone a number of important new production processes the USSR ministry of ferrous metallurgy plans to put into operation by 1990 with the objective of reducing the 5.5-million-ton shortage of caking coal is going to cost almost 700 million rubles in capital investment less than the creation in the Donbass of additional capacities to extract and prepare the same volume of coal. More extensive introduction of coke-conserving technologies in blast furnace operations can yield major savings, particularly in view of the fact that the cost of the coke represents 40 per cent of the cost of producing the iron.

Computations undertaken by the experts have shown that the introduction of the process of making coke using caking additives can alone reduce the demand for the particularly scarce coals by some 20-25 million tons a year and at the same time produce 6-8 million tons of distillate fractions used in the production of motor fuels and as a result achieve savings of more than 100 million rubles a year.

Nor can we neglect the social aspect of this problem, namely, the objectively progressive degradation of temperature and geological conditions in the mines associated with the increasing depths at which mining operations are being conducted and the increasing danger posed by underground shocks and the sudden expulsions of coal, rock and gas, which require the adoption on a massive scale of special measures aimed at improving safety and working conditions for the miners.

Under these conditions it becomes necessary to approach the problem of insuring ferrous metallurgy a reliable supply of coking coal from the point of view of what is most advantageous for the national economy. We must first of all establish priorities and determine the economic advantage to be derived from channeling capital investment into the extraction, preparation and transportation of coking coal as opposed to putting these resources to work funding more extensive introduction of advanced new resource-saving production processes in ferrous metallurgy.



In terms of method, the solution to this problem as applied to the coal and ferrous metallurgy industries can be represented in the form of the consolidated block diagram shown at left.

Here, 1 represents the establishment for the country as a whole, and if necessary for each economic region individually, of the extent (volumes) to which the caking coals can be replaced by the more easily obtainable coals through the introduction of improved, resource-saving technologies in by-product coke production and blast-furnace operations;

2 - recomputation of the demand balance for caking coal for coking and reserves of this material, which must satisfy the following conditions:

$$\Sigma d_{i_\beta} - \Sigma d_{i_m} \leq \Sigma d_i,$$

where d_{i_β} represents demand for i-th-rank caking coal;

d_{im} represents possible savings in i-th-rank caking coal which could be achieved by going over to resource-conserving technologies;

d_i represents reserves of i-th-rank caking coal;

3 - computation of capital investment required to introduce coal- and coke-conserving technologies nationwide, and if necessary for each economic region individually, to insure the savings in coal and coke required in Block 1;

4 - computation of capital investment required to insure extraction and preparation of coal in volumes called for in Block 1;

5 - comparison of capital investments computed in accordance with requirements contained in blocks 3 and 4;

6 - establishment of sequence and effectiveness of introduction of resource-conserving technologies.

A model in which capital investment for the introduction of resource-conserving technologies (Block 3) does not exceed the cost of extracting and preparing the caking coal thus conserved (Block 4), taking account of possible costs involved in transporting coal from one region to another where it is in short supply, would be acceptable. If analysis shows that either nationwide or in the case of an individual economic region capital investment for the introduction of resource-conserving technologies is exceeding these costs, it will be necessary to take another careful look at the status of the introduction of these technologies in by-product coke production and blast-furnace operations in the ferrous metallurgy industry and analyze the effectiveness with which these innovations are being employed with the objective of determining the sequence in which they should be introduced at industry enterprises so as to be able to achieve the desired savings in coal and coke (Block 6). This kind of analysis will enable us to identify the economic advantage to be derived from accelerating the introduction of new resource-conserving technologies in ferrous metallurgy, build up reserves of coking coal substantially and decide on the efficient and intensive directions in which to take the development of individual coal fields.

Under present-day conditions, however, this is not enough. Data now available from the exploitation of resource-conserving technologies also points to the need to develop a long-range integrated interindustry program designed to build up reliable reserves of coking coal and save coke which could be modified as necessary over time to take account of advances in science and technology.

This program would also have to take account of the interindustry relationships entailed in its implementation from the point of view of the scientific, material and technical inputs involved and not only take into account the problems involved in the reequipment of by-product coke production and blast-furnace operations in the ferrous metallurgy industry in this direction and in arriving at the most efficient ways to extract and process coking coal in the different economic regions of the

country, but also provide for solution of a number of other problems associated with efforts to insure economical utilization of material, manpower and financial resources. Implementation of a program like this would, among other things, enable us to achieve substantial reductions in the volume of solid fuel we transport and, accordingly, in the transport costs involved and eliminate unrecoverable losses amounting to millions of tons of coal which occur in the course of moving the coal to consumers.

Beyond that, it would also be a good thing over the course of the next few years to include funds for the development of coal- and coke-conserving technologies in our national economic plans and earmark them specifically for this purpose, that is, a separate line which would enable us to hold economic managers more directly accountable for the solution of a particular problem.

8963
CSO: 1822/123

STUDIES CONDUCTED IN USE OF SOLAR HEAT

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 4, Apr 87 pp 116-18

[Article by A. Fert, candidate of economic sciences, R. Dal and N. Sukharevskaya (Kiev): "Possibilities for the Use of Solar Heat"]

[Text] The basic provisions of the USSR long-term energy program outline a number of measures aimed at reducing consumption of fuel and energy resources through extensive utilization of nontraditional, renewable sources of energy, which would, of course, include solar energy.

The past few years have seen the USSR build more than 50 experimental solar facilities for heating and cooling buildings and other structures. These facilities represent a variety of technical solutions and are located in many different climatic regions of the country — in the southern Ukraine, Central Asia, the Caucasus, near Moscow and even in Siberia. It would be only natural for the operating conditions and engineering-economic indicators for these facilities to differ substantially, which complicates the problem of determining the most efficient technical and technological approaches to the construction of these solar systems.

To establish comparability with the objective of analyzing different thermal system designs it is going to be to advantage to design, build and operate them under the same natural-climatic conditions.

The most promising region for conducting experiments in the application of solar energy is the Black Sea coast of the Crimea. Characteristics of this area which predetermined its selection for the use of solar systems would include the large number of sunny days a year here (as many as 300), the more rigorous requirements here for a clean environment, taking account of the natural resources and the therapeutic factors, and its geographic location: it is a territory which occupies a narrow strip along the coast (up to 10 km wide) bounded by a range of mountains. It is precisely here that we can find all conditions required for the accumulation of solar energy. We should also be considering the projected shortages of fuel and energy resources in this area.

Over and above these considerations there is the fact that there is already available experience in the Crimea with the design, construction and operation of solar systems, to include the design of the large solar facility near Alushta (it will be the central

focus of a large-scale experiment) and the construction of the solar electric power plant on the Kerch peninsula.

Experimental designs for residential and public buildings equipped with a variety of solar heating systems were analyzed with the objective of determining the most efficient way to use solar heating systems and the layouts and technical solutions which would be best employed under the conditions prevailing along the Black Sea coast of the Crimea. This permitted the conclusion that from both the technical and economic points of view, the thermal energy of the sun both now and over the period extending to the year 2000 would be most effectively exploited under the conditions prevailing in the Crimea primarily to supply hot water for municipal housing construction projects, particularly in view of the fact that there is already a fund of available experience with the use of solar heat generators for this purpose, which cannot be said for solar systems for heating buildings.

Centralized solar heating systems (TETs, large rayon boiler facilities and heating systems) should find increasing application primarily in the Crimea's urban development projects, particularly where there is already a fairly highly centralized heating system.

It should be pointed out that one of the problems involved in the construction of centralized solar systems consists in the layout of the large surfaces of the solar collectors, the location of which is limited geographically by the patterns of urban development along the coast.

If over the long term we are going to solve these problems together with the urban planning considerations involved, these difficulties can be overcome by searching for the most economical solutions (building the solar collectors over automobile parking lots, summer outdoor theaters, dance areas, children's playgrounds and athletic fields and so forth). A number of areas in the Crimea, Greater Yalta, for example, and particularly the resort area, are currently supplied with their heating from a number of small boiler facilities. For areas like this it would be most efficient to build combination solar-fuel systems which would incorporate the existing small heating boilers. In systems like this the solar energy will entirely or at least partially cover the heating requirement for the hot water system, while the energy generated by burning the traditional fuels will make up the shortfall in solar energy going to the hot water system and at the same time entirely cover the winter heating requirement. For low (individual) buildings no more than a few stories high located at some distance from residential developments and heated by local boilers, where electric and gas household water heaters are frequently used as backup sources of heat, as well as for facilities which are used on only a seasonal basis, it would be best to build separate solar hot-water systems.

Taking as a basis the predicted growth in the production capacities available for the fabrication of solar collectors as of 1990 and the year 2000, we have determined the fractions of both residential and public buildings along the Black Sea coast of the Crimea which can be equipped with solar hot water systems. Over the years of this extended period we have assumed the proportion of these structures to be 10 and 20 percent of the total respectively (differentiated with respect to type of structure).

Computations based on estimates of the extent to which these solar systems are introduced and the dynamics of the change in the cost of building and operating them associated with the long-term changes in the cost of organic fuels show that under the conditions prevailing along the Black Sea coast of the Crimea, for most of the individual and centralized solar systems recoupment will begin by sometime around 1990, and by the year 2000 they could be economically efficient in any application.

It is most economically justifiable to use solar systems to supply hot water to the seasonal health resorts. These facilities can be heated and supplied with hot water with solar energy alone. In this connection, in addition to the savings in organic fuel and the benefits to the environment, the installation of solar systems in these seasonally employed facilities can already yield annual economies of between 2.6 and 12.4 rubles per square meter of solar collector area.

Self-contained solar hot-water systems can also be effectively employed as substitutes for small-scale heating plants (furnace heating, small or outdated boiler units etc.), which as a rule, are not terrible fuel-efficient. So there is promise in the idea of using solar systems in areas of the Crimea with low structures (1-2 stories), where the conventional heating systems are decentralized and it would be possible to obtain maximum fuel economies. Annual savings from the introduction of solar systems for use in the smaller structures will by 1990 be running to 2.8 to 6.4 rubles per square meter of solar collector surface, while by 2000 these systems will be paying for themselves all over the Crimea.

In terms of the adjusted costs involved, the construction of centralized solar systems is a promising direction for the development of solar heating systems along the Black Sea coast of the Crimea. By 1990 the annual savings from the construction of centralized solar systems here are predicted to be in the neighborhood of 12.3 rubles per square meter of collector area. The table below shows engineering-economic indicators for solar heating systems operated along the Black Sea coast of the Crimea.

Economic-engineering indicators for solar systems operated along the Black Sea coast of the Crimea

Indicator	1985	1990	2000
Cost (capital investment) of building solar systems in millions of rubles	15.7	22.4	48.9
Total fuel savings, 1000 tons of standard fuel annually	17.6	40.9	46.9
Solar collector area, thous. m^2	120.7	284.7	682.0
Useful area served by solar heating systems, thous. m^2			
residential	240.7	558.7	1346.8
public	245.5	630.6	1555.4
Annual savings (+) or loss (-) in millions of rubles	-1.5	-0.2	+1.2

Taking into account, now, the possibility of matching the structure and layout of new residential and public construction and the location of these buildings more closely against conditions governing the construction and operation of solar hot-water systems and, accordingly, of reducing expenditures in these areas, enables us to arrive at some conclusions concerning advantages to be derived from installing solar systems in new construction first. After 1990, part of the work on solar heating systems may be concentrated on the conversion of existing residential structures.

Successful implementation of a program involving the use of solar energy to supply heat is going to require more work in the scientific research and planning and design areas. Realization of a series of measures (designing solar systems for the most characteristic types of buildings and building and operating conditions, establishment of optimum parameters for these systems, determination of engineering-economic parameters of conventional heat generators currently in operation, those which will be kept in operation over the long term and those planned for construction along the Black Sea coast of the Crimea and, finally, computation of overall demand for different types of fossil fuel in connection with the supply of heat to the coast) will contribute to successful implementation of the goal-oriented energy-saving policy outlined in Basic Directions of Social and Economic Development in the USSR for the Years 1986-1990 and the Period Extending to the Year 2000.

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CSO: 1822/123

CURTAILING ENERGY USE AT HOME, WORK URGED

Kiev POD ZNAMENEM LENINIZMA in Russian No 24, Dec 86 pp 33-36

[Article by V. Gereylo: "Economize at Home, Too!"; "Food for Discussion"]

[Text] The past few years have seen us give a great deal of attention to discussions of the need for economy and efficiency in the use of energy and materials both in industry and outside it. You would think that by now everybody would be conscious of the need for strict economies in the consumption of these resources. But views of these savings as something secondary, something on the order of an option on the side, are still fairly widespread, particularly when it comes to talking about economies in the home. Some people attach no importance to these "trifles" whatsoever.

In the meantime, however, a recognition of the need to develop this awareness of the need for economies in the consumption of resources lies at the basis of plans for the country's social and economic development. Suffice it to say that plans call for the country to meet 75-80 percent of the increase in its fuel and energy requirements through economies in the consumption of these materials.

So, if, for example, 100 tank cars of petroleum are needed to achieve some projected increase in production, only 20-25 of them are going to represent newly extracted oil. The people involved in the manufacture of this particular product are therefore going to have to save through more judicious utilization of the resources made available to them. Looked at in terms of the figures at republic level, this "remainder," that is, the total economic gain from the savings required is going to total more than 10 billion rubles, according to plans for the 12th Five-Year-Plan period.

Let's look at this figure a little more closely. Ten billion! This number represents all those little grams, millimeters, centimeters and kilowatt-hours we run through so blithely without stopping to consider the fact that these are our common losses. And wherever these losses occur, in the enterprise or organization where we work, or in the house or apartment where we live, these are still losses to our society as a whole, which in turn means losses to each and every one of us as individuals.

It is also important to be more acutely conscious of the fact that the Soviet people are actually contributing only a very tiny proportion of the actual cost of resources consumed domestically. Payments for an apartment and municipal services such as gas, electricity, heat and hot water, for example, have remained unchanged in our country

since 1928 and on the average represent approximately 3 percent of the worker's or white-collar employee's family budget. In the United State and Great Britain, on the other hand, some 20 percent of a family budget goes for these items.

The level of domestic energy consumption determines how comfortable people today are going to be, a level which has a tendency to rise. The problem is, however, that we cannot continue to increase our production of the resources required for this indefinitely. In the first place, this is becoming at one and the same time both more difficult and more costly and, secondly, it will result in the exhaustion of deposits of some of our most plentiful resources, such, for example, as coal, oil, shale and natural gas. This is why the problem of insuring thrifty, economic use of the resources we do extract is becoming a matter of increasing urgency.

The price of a kilowatt-hour

Last year our country generated 1.545 billion kilowatt-hours of electricity. Some 230 billion of these kilowatt-hours went for our municipal and domestic requirements. And going into all these kilowatt-hours was the labor of thousands of workers in the extractive industries and of the transport workers and power engineers, plus the labor of all the people involved in the construction of our electric power plants. These contributions, however, the importance of these labor inputs goes beyond this. One kilowatt-hour of electricity is enough to produce, for example, one pair of shoes or 5 kilograms of sunflower oil, or 14 kilograms of flour, 30 kilograms of bread, 40 kilograms of granulated sugar or 1.5 kilograms of paper. This is the kind of work a kilowatt-hour can do! And the fewer of these we use up at home, the more we'll have available for work in industry. If in every apartment in the country, for example, we turned off a 60-watt light bulb for 1 hour we would save more than 4 million kilowatt-hours of electricity. But economies for the sake of economy pure and simple does noone any benefit. What is important for us to learn is to use as little electricity as possible without making ourselves uncomfortable. So, let's see if we can identify where we use the most electricity in our homes and then things we can do to reduce our consumption of this resource.

Every year sees Soviet industry deliver as many as 150 million electric household appliances and machines to the stores. Our homes now contain more than 1 billion of these items. The number of radios and television sets continues to rise. We have over 100 million television sets alone. Nationwide we are using something on the order of 30 billion kilowatt-hours a year to operate them (for an average of 4 hours a day). And then we are using approximately the same amount of electricity to light our homes.

With the acquisition of each new electric appliance we become a little more comfortable and our household chores a little easier. So nobody is going to suggest that we do without these little helpers. The main point here is that we need to chose and use them in the most efficient manner possible.

When we buy a kitchen ensemble, light fixtures or an electric fireplace we take account of the current fashions and the prestige a particular model or design carries with it. But what we also need to consider whether or not the capacities of these items are appropriate to the needs of the family, the size of the apartment and so on. Nor do many people pay attention to how many electric appliances are turned on

at the same time. This is very important during the hours of peak usage, what with the fact that it could overload the electric power system.

Conscientious, efficient operation of household appliances means, for example, seeing that the volume is properly regulated on our stereo-radio sets, television and tape recorders, remembering to defrost our refrigerators when they need it and using the right shape and size of cookware on our hot plates. Frost buildup in the freezer compartment of a refrigerator, for example, and refrigerator doors which have not been tightly shut can increase electricity consumption by 15-20 percent, while pots and pans with uneven bottoms on the hot plate can raise it 40-60 percent. On the other hand, the thick-bottomed cast-iron and steel utensils, which cover the burner surface well, can cut electricity consumption 10-20 percent.

It has been computed that nationwide we could save 2.6-3.2 billion kilowatt-hours of electricity a year in household lighting alone and still be more comfortable. Among other things, the experts advise us to go from general lighting for an entire room to a system of zonal lighting. Within your apartment assign certain areas for studying, relaxing, reading, dining and for work in the kitchen and then provide these areas with appropriate with sconces and floor lamps and table lamps. For every 18-20-square-meter room in your apartment this could save you as many as 200 kilowatt-hours each year and the country as a whole up to 400 million kilowatt-hours.

The use of the multibulb overhead fixtures consumes too much electricity and at the same time does not provide the proper level of illumination. Why, after all, do we need to light up a whole room if fewer lights could do a better job of illuminating the corner we need to use.

The electronic light controls, which are becoming increasingly popular for household use, and fluorescent lights can also yield major savings in electricity. These are 3-4 times more economical than the incandescent lights, put out 4-6 times more light and last almost 10 times longer.

Nor can we neglect to mention the following important detail: by wiping the dust off lamps and ceiling fixtures we can improve the lighting in an apartment up to 10-15 percent. This something that literally everyone can do to save electricity. But sometimes we forget about it.

If every family would save one kilowatt-hour of electricity a day, the country as a whole could save more than 3 billion kilowatt-hours over the course of a year.

In 1986, for example, workers in Chernigov undertook an obligation to save 15.6 million kilowatt-hours of electricity above and beyond the plan targets. Thousands of enthusiasts joined in this effort. As a result, according to preliminary calculations, they will exceed their goal by a substantial margin.

A workers initiative in Kharkov is going to extend competition to reduce electricity consumption in households by 6 percent as compared with power use the previous year. Why 6 percent? Because this is the amount by which, in the view of the initiators of the competition, it is possible to cut consumption without interfering with the customary domestic comforts. The competition started toward the end of last year with a group of residents in two buildings on Barabashov Street; participating in

this effort now are occupants of more than 500 buildings. Over the course of the first half of 1986 they saved 115,000 kilowatt-hours.

The heat in our homes

Each year sees the people in our cities and villages make their careful preparations for winter, the object of these preparations being, of course, to make sure our homes and industries have the heat they need through this cold part of the year, to see to it that no stretch of bad weather interferes with the smooth operation of industry, transportation, agriculture or other sectors of the economy.

It is the Soviet Government that assumes the responsibility for these preparations and bears the costs involved. Residential housing is being tied more and more to our centralized heating systems, which insures good service and more economical utilization of fuel and energy resources. The UkSSR ministry of energy alone, for example, saw the share of heat generated centrally rise last year by almost one-fourth over the figure for 1980 (23.7 percent) and reach 73.3 million gigacalories.

But there is still a great deal that residents themselves can do to help conserve heat. First of all, they should seal up the cracks around their doors and windows, closing off the least little space with cotton batting or porolon [transliteration]. Windows should be sealed over. The stores sell special strips of paper for this purpose. This is not anything difficult; anybody can do it, and the benefits are great.

Here's an example. To maintain a two-room apartment at normal temperature (under moderate climatic conditions) during the winter the boiler is going to have to burn as much as two kilograms of coal an hour around the clock. But if there are cracks in the windows of this apartment, and if the doors do not close tightly, you can expect this fuel consumption to rise to 4 kilograms as a result.

To this we can add another 4 kilograms of coal which have to be burned every hour to make up for the heat which escapes through entrance doors that remain open. Over the course of a 24-hour period this comes to roughly 1 quintal. So it should come as no surprise that some one-third of the heat the country generates goes for heating and supplying hot water to the residential sector.

And just as we do for our electricity, we're paying only kopecks for it. Might this not be the reason why some of our city dwellers don't care a whit about doing anything to conserve it? It has been shown that over the course of a single heating season, one family's irresponsible attitude toward heat conservation can be linked to the consumption of 7.5 tons of coal or a corresponding amount of other fuel. And how many families like this are we likely to find in any given building? A development? A city?

Some people will leave for work with the small window, a whole window or maybe even the balcony door in the aprtment still open. And then they might even brag about it: I'm not afraid of a little cold, they'll say. But the fact is, of course, that this is really criminal behavior — these people are stealing heat from our apartments, because in heating the streets this way they are inflicting enormous losses on our overall fuel balance.

Not every apartment dweller is going to concern himself with, say, sealing over his front door with the prolon, the cotton batting or dermatin [transliteration]. In the meantime, however, a well-heated door and sealed windows can save one-third of the fuel required to heat the apartment. One-third!

Proper operation of heating equipment can also help conserve heat. If we put furniture or any kind of solid decorative paneling in front of them we are going to be cutting the heat we can get out of this equipment by one-fifth. This is why during the heating season we should not block radiators and fireplaces with furniture or any kind of solid curtains or partitions.

This would appear to be such a simple step to take, one that would return as much as 20 percent more heat to a home. But if we can save 1 percent of the fuel and electricity which is now being consumed by the residential-municipal sector we could save the country 3 million tons in standard fuel each year.

So it is important to combine the efforts of the housing associations, the various offices involved and of the public at large behind in the overall effort to save energy in the home. With this objective in mind, for example, a board was organized by volunteers in Moscow's Kirov Rayon to look after the operation of buildings, while in Ordzhonikidze Rayon in Kharkov another group of volunteers has organized a repair brigade. These groups help residents insulate doors and windows in their apartments, mount springs on the front doors so they will close tightly, repair faucets and discuss with the people the need to help conserve resources in the home.

When you talk to people who are employed in the residential sector or with the people who live there about cutting down on the consumption of resources in the home you will invariably have to listen to a great deal of complaining about the unavailability of control and measuring devices and the economizer systems. It would of course be best to have a radiator in your apartment which would allow you to control the amount of heat it puts out. But these aren't available for the time being. So you have open your windows and heat the streets. The conservation-minded apartment dweller, on the other hand, has an obligation to report this to the housing people, who will look into the causes of the heat imbalance.

Then there is the economical housewife who, even though she doesn't have a gas meter, will set her pot of prepared food next to the hotplate before she even lights the burner. When she lights the gas she checks to see that the flame is burning evenly over the bottom of the pot without extending beyond the edge of it, since she knows that these long tongues of fire wouldn't speed up her process anyway. When the liquid starts to boil she imediately turns down the fire. She knows, too, that to save gas it is best to use a low, wide-bottomed pot and to keep a special high-ribbed support under the pail with the extract.

Is a "gift of nature" really free?

"You are not simply essential for life, you are life itself." This is what Antoine de Saint-Exupéry wrote about water. And when somebody mentions this you can sometimes hear people respond with the wish, for example, that someone "stay healthy, like water" or the saying "Father bread, mother water."

And it is, of course, true that water is the cradle of life on this planet, a priceless gift of nature. And, let us add, a great factor in our health and hygiene, indispensable in our cities and villages. This should dictate a corresponding attitude toward our water as something that represents a national asset which should be placed under the protection of the law and that should be consumed with appropriate care and economy.

The actual state of affairs in this area, however, points once again to our wastefulness, behavior we have been "brought up with" because water has been so accessible and cheap. Not many people give much thought to what it costs. It's so simple, after all: you turn the faucet and out comes a steady flow of slivery liquid.

But this silvery stream is no longer the one that delights the eye in a natural setting, no longer simply the "gift" of nature. Supplied to our homes and brought up to proper quality by human labor, it has by this point been turned into a product, a product with a cost and a product with a price. Because to collect and treat a cubic meter of water, send through the mains and then remove it and purify it will consume an average of one kilowatt-hour of electricity. And then how much human labor over and above that! So how can we not be struck by the fact that we so thoughtlessly allow over one-fifth of this product to be lost to us?

Here is what Comrade M. S. Gorbachev had to say on this subject in remarks to members of the Leningrad party aktiv on May 17, 1985: "Now here's a simple situation we face every day when we turn the faucet to shave and wash. According to figures from the Scientific Research Institute of Municipal Water Supply and Purification, roughly 21 percent of the country's drinking water goes straight down the drain into the sewers without being used for anything.... And the result is that to supply only what is ultimately going to be uneconomically used water the country uses electricity in amounts each year equal to the output of the Dnieper Hydroelectric Power Plant. Over a 5-year period we could save 2.5 billion rubles by more economical utilization of our water alone."

So here once again we're talking about figures which run into the billions, billions which could go to meet the needs of society and to improve the quality of life for our working people. They could, if we would learn to use our water economically. And let us emphasize right here that nobody is being called upon to limit his consumption of water for any particular purpose; the appeal is simply that we use water efficiently and use it without wasting it.

Within the domestic sector of the economy, improvements here can take two different directions. Efforts in the first will be entirely those of residential consumers themselves and boil down simply to observing the elementary rules for using the water system. Specifically, turn faucets on and off smoothly, gradually, without any sudden motions and without using force. Don't turn them immediately all the way off. Wait a few seconds for the water to run out and only then turn the faucet tighter if necessary. Don't let even the slightest drips or leaks develop: if you notice a faucet or a joint in your pipes start to leak, shut off the main intake valve immediately and call the sanitary engineering plumber.

For the fact is that over the course of a 24-hour period a stream of water as thick as a match can amount to 480 liters of waste. And what would this figure be for a

week? Or a month? It has been computed that a stream of hot water this size running for a year would waste enough heat to heat the entire apartment for two months.

The conservation-minded apartment dweller is under no circumstances going to leave his faucets running. But isn't it true that we will sometimes turn on the water and then get distracted "for just a second" by the telephone or the door bell or something similar and that these "seconds" will sometimes then drag on into tens of minutes? These little incidents, these examples of carelessness in the way we use the water in our homes, all add up to a pattern of wastefulness.

The second approach we can take to the problem of economizing in our consumption of water consists in improving the operation and maintenance of the water system and the quality of the work being done by apartment building workers, particularly the plumbers. When, for example, faucets, valves and tanks were repaired in buildings where water losses were highest, the daily consumption immediately dropped by 100 liters per resident. The most important thing here, though, is for these residents now to keep what has been repaired in proper condition.

A great deal is being done in this area in the capital of our republic, where an experiment has been under way since 1982 aimed at insuring more efficient use of water and involving incentives to the housing maintenance workers to help achieve greater economies. The four years of the experiment have so far seen the city save 19.7 million cubic meters of water, 11.2 million over the first 9 months of 1986. Turning in the best results has been the P. Ya. Petrenko's combined plumbing brigade in Darnitskiy Rayon, which has cut the number of employees from 39 to 27 and daily consumption per resident to 187 liters as against a norm of 250 liters.

Cutting losses means timely preventive inspections and repairs on equipment, maintaining it using the guarantee coupons provided the residents, restoring and manufacturing water-shutoff fixtures and spare parts and educational work. The repair shops set up to fix faucets, valves etc. on the initiative of residents in Minsk Rayon have proven themselves to be particularly effective. Here, for example, the first quarter of 1986 saw savings of 250,600 cubic meters of water for 16,500 rubles, part of which was paid out as bonuses for economies.

Experience gained over the course of the experiment to date has now been adopted in all rayons of Kiev and in other cities throughout the republic and beyond. Experts from Donetsk, Odessa, Vilnyus and Novosibirsk have been here only recently to study the experiment, for example.

Targets for the 12th Five-Year-Plan period call for workers of our republic to save 17.1 billion kilowatt-hours, 26.2 million gigacalories of thermal energy and 8 million tons of standard fuel and to cut water consumption by 15-20 percent. These targets can for the most part be reached by striving for greater economies in the consumption of our resources and cutting losses of these resources in both our industry and in our homes.

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August 25, 1987

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